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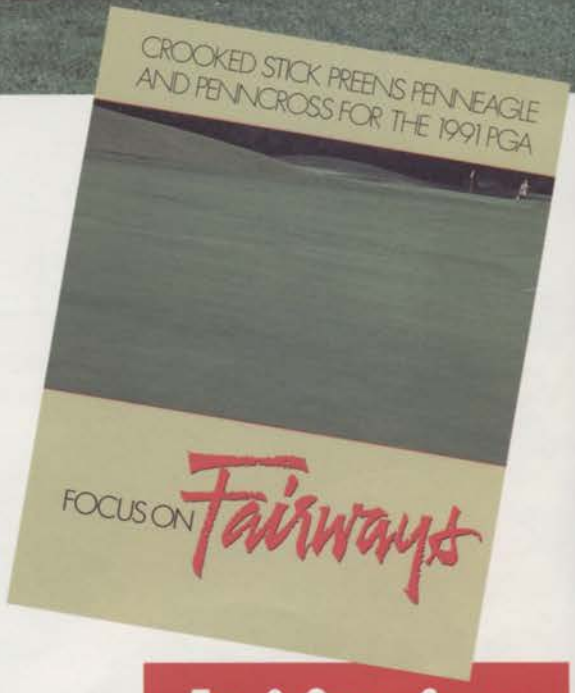

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JULY, 1991, VOLUME 30, NUMBER 7

LANDSCAPE MANAGEMENT

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AS I SEE IT ...

Corrupting our young

Truth in communication was trashed recently by a story in *Ranger Rick,* a kids' magazine published by the National Wildlife Federation. (Thankfully, the NWF is not tax-funded.)

Rick is a cartoon raccoon who fights for a clean and healthy environment. That's something we all want, but it's notable how tactics toward achieving a goal can differ.

In the May issue, Rick and his wildlife friends "find deadly dangers in the deep green grass." Those "dangers" are lawn care chemicals, which are presumed to kill worms and fish, and cause distress to Casey Cottontail and Becky Hare. Rick and Co. take violent action against a man spraying a lawn, causing a swarm of wasps to attack him. (It's *assumed* that the applicator will drench a nest of bunnies.)

The epilogue reads: "How dangerous are lawn chemicals to people, pets and wildlife? No one knows for sure. So until we know they're completely safe, it's better not to use them at all."

Allen James, executive director of RISE (Responsible Industry for a Sound Environment) wrote to Gerald Bishop, the editor of *Ranger Rick*, noting that, "the story's implications and misstatements...serve to induce the 'fear factor' in children regarding chemicals used to protect and maintain our lawns..."

James offered Bishop the services of RISE members in developing a more balanced story.

Bishop's response (italics mine): "We are confident that what we presented is in the best interest of all children who may be exposed to such *toxic* products. We properly point out that while direct harmful effects on children and animals from lawn care chemicals have not yet been conclusively demonstrated, it makes sense to avoid their use through the choice of non-toxic alternatives."

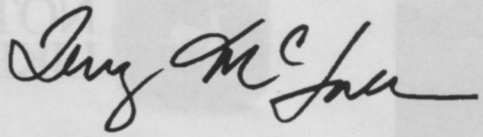
Notice that Bishop says harmful effects have not been proven, yet, in the story, the rabbits experience watery eyes and sneezing, which is blamed on the product.

Bishop never returned my calls, but I spoke with Allen James.

"The RISE governing board reviewed the response and was discouraged with (the magazine's) attitude," says James. No more letters are planned.

The most harmful aspect of this is that the people at *Ranger Rick* believe that they are "educating" children.

We beg to differ. The magazine's "thanks-but-no-thanks" attitude is stubbornly defensive and overbearingly self-righteous. Combined with the article's exercise in misinformation, we have to wonder whether the truth really matters to *Ranger Rick.*



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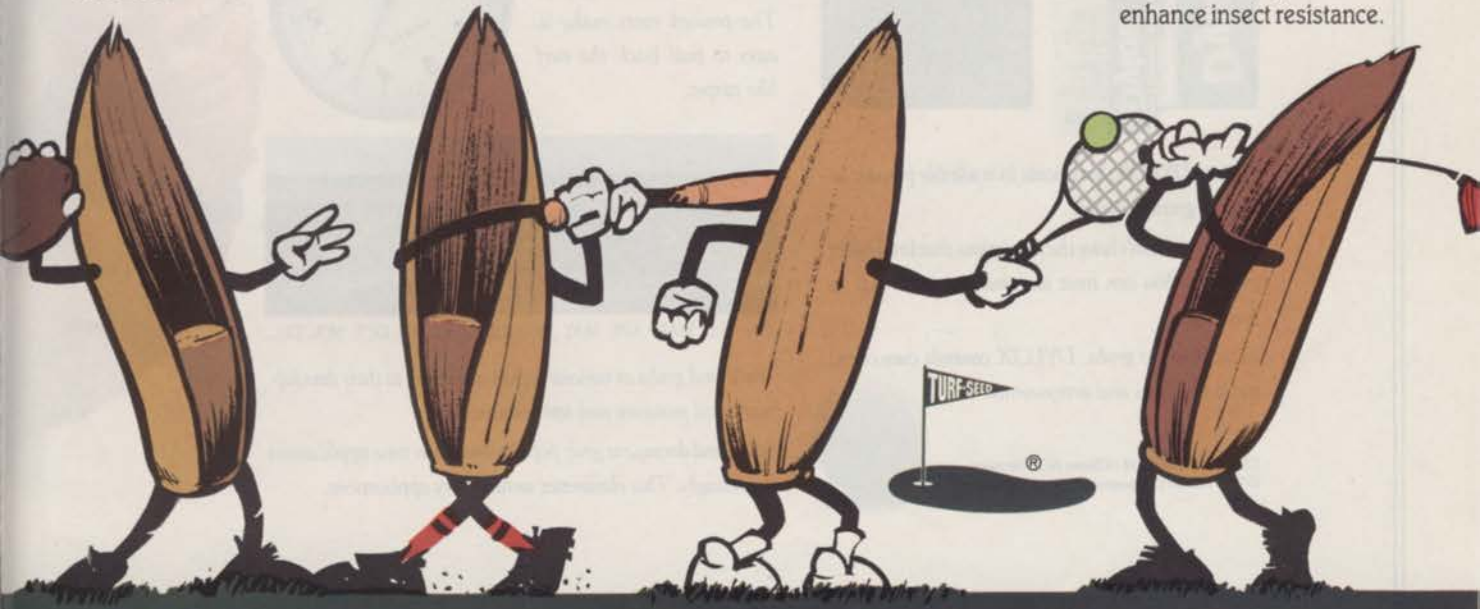

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GREEN INDUSTRY NEWS

JULY 1991, VOLUME 30, NUMBER 7

LANDSCAPE MANAGEMENT

LANDSCAPING

NLA survey indicates slump and successes

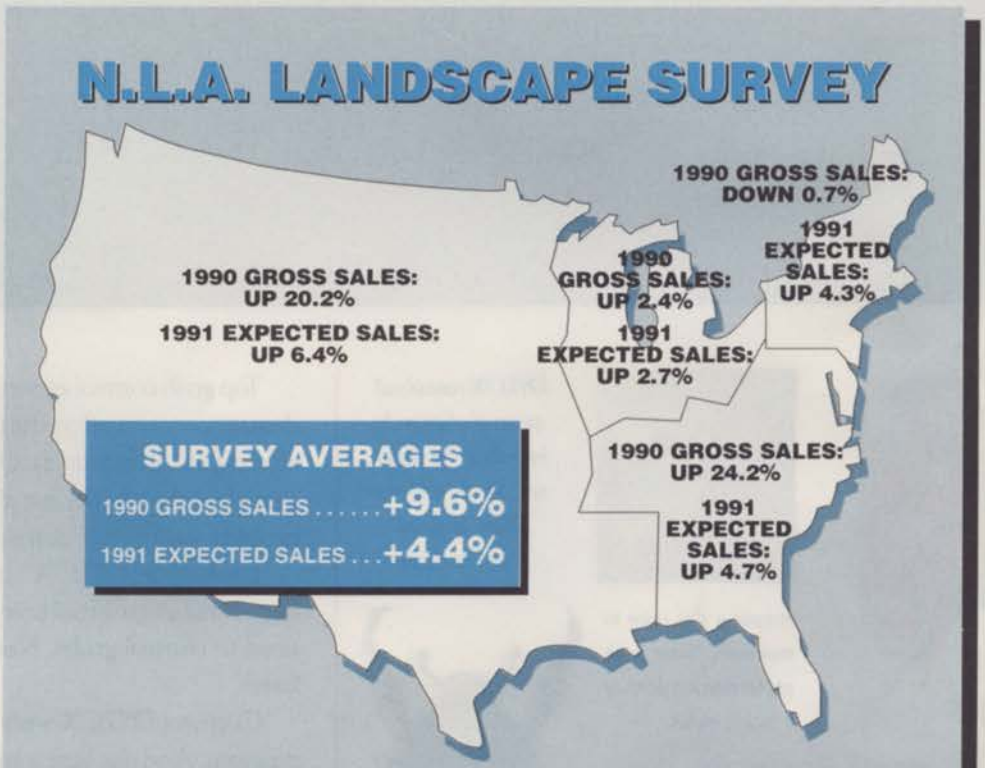
WASHINGTON — The National Landscape Association's 16th annual economic survey indicates that 1990 was a year of slumps and successes.

The Northeast, according to the survey, has been hit hard by what economists are now calling a recession. Landscape sales were off 0.7 percent in the Northeast as housing starts declined 17.3 percent.

Other regions were down somewhat from the pace set in previous years, but overall reported modest gains in sales.

Despite a decrease of 30 percent in housing starts, landscaping in the Southeast grew 24.2 percent—but member firms there expected growth to level off at 4.7 percent in 1991.

(The adjacent survey tables include Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Penn-sylvania, Rhode Island and Vermont in the Northeast region. Alabama, Deleware, Florida, Georgia, Kentucky, Maryland, Mississippi, the Carolinas, Tennessee, Virginia and West Virginia make up the Southeast. Great Lakes states are Illinois, Indiana, Michigan, Ohio and Wisconsin. Due to lack of responses, all other states were lumped together.) □


N.L.A. LANDSCAPE SURVEY
1990 GROSS SALES: DOWN 0.7%
1991 EXPECTED SALES: UP 4.3%
1990 GROSS SALES: UP 2.4%
1991 EXPECTED SALES: UP 2.7%
1990 GROSS SALES: UP 20.2%
1991 EXPECTED SALES: UP 6.4%
1990 GROSS SALES: UP 24.2%
1991 EXPECTED SALES: UP 4.7%
SURVEY AVERAGES
1990 GROSS SALES .....+9.6%
1991 EXPECTED SALES ...+4.4%

	Northeast	Southeast	Great Lakes	All Other	Average
1990 ACTUAL BUSINESS *(percent changes from 1989)*					
New residential	-3.8	+7.3	+2.2	+6.7	+2.2
New commercial	-9.5	+11.7	-5.4	+8.2	-0.1
Res. renovation	+2.0	+6.3	+3.6	+11.0	+4.9
Comm. renovation	-6.3	+4.6	+3.5	+2.7	+0.2
Res. maintenance	+1.2	+20.0	+9.0	+7.9	+8.0
Comm. maintenance	+6.3	+1.9	+8.0	+10.3	+6.6
1991 EXPECTED BUSINESS *(percent changes from 1990)*					
New residential	+0.2	+2.7	+0.4	+3.7	+1.2
New commercial	-5.0	-2.9	-11.4	+3.2	-4.7
Res. renovation	+7.9	+8.6	+10.2	+10.4	+8.9
Comm. renovation	+0.1	+7.9	+6.4	+4.4	+4.4
Res. maintenance	+1.9	-3.7	+6.9	+6.3	+2.3
Comm. maintenance	+7.8	+7.6	+5.4	+8.7	+7.4

ENVIRONMENT

Landfill issue requires cooperation, new ideas

CLEVELAND — The "landfill crisis" has successfully instilled panic in every man, woman and child on the planet. Many questions still need answers.

A recent yard waste conference here presented the ramifications of the mandate, effective in 1993, which will ban yard waste from landfill areas. Landscapers and city planners were there to share ideas, or speak their minds about how landfill has changed the way they work.

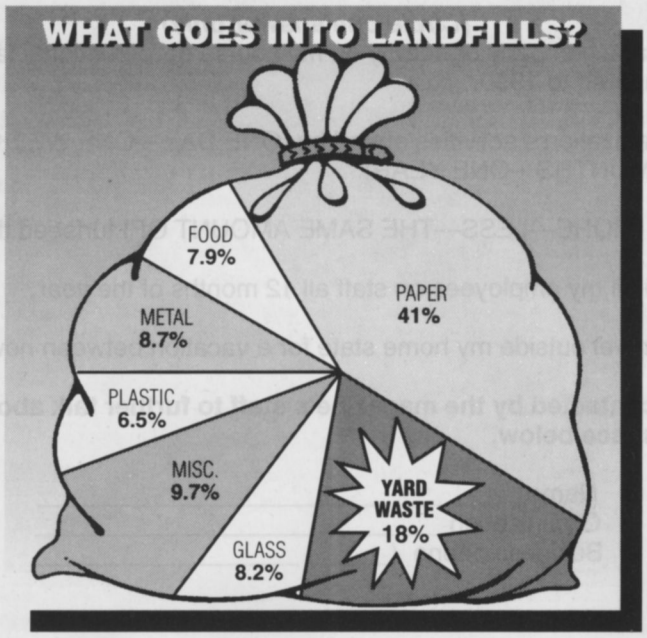
"Ten states have banned yard waste from the landfill waste stream," says Carolyn Watkins, manager of the Ohio EPA.

A number of communities in Northeast Ohio have opened composting facilities. There are strict guidelines having to do with site clasifications, and waste material allowed at those sites.

Jack Kerrigan, Cuyahoga County Cooperative Extension: "We always assumed there was plenty of space. But landfill space will become more scarce. We can make the best use of those spaces we have if we keep recyclables and biodegradables out of the landfills."

Kerrigan is training volunteers to bring the "Don't Bag It" message to area communities.

"If everybody made landscape beds one or two feet wider, there'd probably be one or two fewer bags of clippings from each and every residence," says Andrew Sparks, a Cleveland landscape ar-chitect who wants people to first take the time to consider the growth habit and life expectancy of plantings.



"It's important to consider the length of time the landscape is going to survive," advises Sparks, who says tender plants or those which will quickly outgrow the site should be avoided.

"And that includes municipalities with trees planted in four-foot holes in city streets that will live for two years. Even if they live longer than two years, it will not be an easy life."

Plant in spaces in which the species will live, says Sparks. "The existing plants should take precedence over plants you'd like to see there."

"When you design a landscape that a client wants to see at some level of maturity immediately," says Sparks, "you are almost invariably forced to design with plants that won't fit the space in five years.

"We could reduce woody and leafy prunings by 75 pecent a year if we plant fewer forsythia, red stem, dogwood," says Sparks. "(Those plantings) provide an immediate impact, but also provide a future headache."

If a customer wants a composting area as part of the design, Sparks says the architect or contractor needs to know that ahead of time, not when the job is done.

Design aspects to consider when a customer wants a compost area are: the type of compost, amount of material, and site location.

"And plants should be able to provide some competing fragrance to buffer the smell of the compost."

Bob Smart's problems are many. A Cleveland landscaper, Smart is concerned about how "the little guys" will be able to implement composting. He believes widespread customer awareness campaigns are needed. And the landscaper can't become the patsy to customers who want clippings and yard waste hauled away, sometimes for free.

"Processing costs have increased 385 percent," laments Smart, "and dumping costs have escalated $1000 to $2000. How do I increase the service cost to customers to pay for dumping?"

Smart wants more cooperation between municipal government and companies. In this type of situation, he says, the small businessman always bears the heaviest burden.

Kerrigan suggests that landscape contractors form cooperatives to purchase and share the cost of land to be used for dumping. □

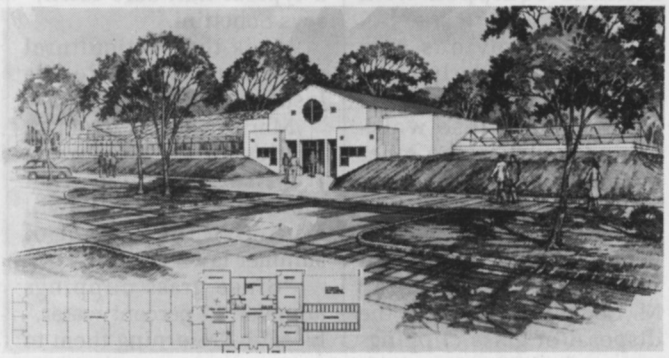
ORGANIZATIONS

Florida Turf gets state money for new research facility

ORLANDO — The Florida Turf-Grass Association has received $350,000 in matching funds from the state for its new Envirotron research facility. That money, along with $350,000 raised by the foundation through private donations, will be used to construct a laboratory. The University of Florida campus in Gainesville will be the Envirotron's home.

"Accurate scientific data will now be available to all Floridians who want a 'Green Florida' but not at the expense or risk of damaging our environment," says FTGA executive director Bob Yount.

The funding thrust was a cooperative effort involving FTGA members, the Florida GCSA and others. □



LANDSCAPE MANAGEMENT MINI-SURVEY

Please fax or mail your answers to the questions below to LANDSCAPE MANAGEMENT before August 1st. We'll compile the results and publish the statistics in our October issue.

(Circle one answer only)

1. Business at my landscape company or activity on my course or recreational facility was (UP—DOWN—THE SAME) in 1991 compared to 1990.

2. I routinely plan my organization's activities ahead by (ONE DAY—ONE WEEK—ONE MONTH—THREE MONTHS—SIX MONTHS—ONE YEAR).

3. This year, I've planted (MORE—LESS—THE SAME AMOUNT OF) turfseed than I did last year.

4. I (DO—DO NOT) keep all my employees on staff all 12 months of the year.

5. I (WILL—WILL NOT) travel outside my home state for a vacation between now and next spring.

If you would like to be contacted by the magazine's staff to further talk about any of the points made above, fill in the space below.

Name_____
Organization_____
Business phone (_____) _____

Thank you, the editors.

Mail form to: LM, 7500 Old Oak Blvd., Cleveland, OH 44130
or fax form to: (216) 891-2675.

RESEARCH

Landfill panic spurs larger clipping study

KUTZTOWN, Pa.—One company's mulching mower research has been expanded, in light of what some call a "landfill crisis."

Garden Way, Inc., of Troy, N.Y. has teamed up with the Rodale Institute Research Center and *Organic Gardening* magazine to determine whether a Bolens mulching mower is more beneficial for turf than conventional walk-behinds equipped with bags.

In the previous two years, two similarly sized grass plots were tested: one cut with a Bolens walk-behind mulcher, the other with a conventional walk-behind.

"We have expanded the program each of the last three years," says Dr. Terry M. Schettini, "because the disposal of grass clippings has become a major environmental concern for communities all across the country. Our observations continue to show that mulching mowers offer a very viable and effective solution.

"We found that a mulching mower can return nearly 5,500 pounds of grass clippings to the soil and eliminate up to 465 bags of clippings each summer when used to cut a typical half-acre lawn," says Schettini.

He is the horticultural coordinator at the Rodale Institute.

Mark Herbert, a senior horticulturist for Garden Way, says he hopes that the mulching process will minimize the impact of summer lawn burnout.

"Since grass clippings are over 90 percent water," he said, "returning them to your lawn can help reduce the damage caused by hot and dry summer weather conditions."

The study also utilizes soil sampling.

Bolens is a subsidiary of Garden Way. Other companies have begun to market mulching mowers, including Toro and John Deere. □

CORRECTION

Ransomes America Inc. was inadvertently omitted from our April article on mid-sized mowers. For detailed information on Ransomes' newest hydrostatic line of mowers, see the product announcement on page 56.

ASSOCIATIONS

Independent distributors form cooperative group

WASHINGTON, D.C.—The Independent Turf and Ornamental Distributors Association (ITODA), with 29 members from across the U.S., is serving the green industry in a unique way.

Headquartered here, the association's members "are dedicated to the principals of developing and maintaining the highest levels of marketing stewardship, training and developing quality sales personnel." ITODA also seeks to provide product users with educational and technical support.

"It is our desire to offer the opportunities of membership to as many companies who qualify as independent distributors serving this industry," says J. Herbert Lea, president.

ITODA members meet at least twice each year to discuss industry issues related to product and service distribution. The group's second annual conference will be held in Hilton Head, S.C., Oct. 23-27. Call (301) 899-3535 or (217) 352-0591 for information. □

ORGANIZATIONS

Grasscycling available to communities

MARIETTA, Ga.— Members of the Professional Lawn Care Association of America (PLCAA) are providing municipal governments with a step-by-step guide to help eliminate grass clippings from their landfills.

The 20-page "Grasscycling Community Action Plan" helps cities develop a strategy to promote public participation and support for grass recycling concepts.

The book includes suggestions for promotional events, a timetable, sample letters, press releases, broadcast announcements, etc.

The plan, available free through PLCAA members, has been made possible through the generous support of John Deere and The Andersons. □

GOLF

For golf supers seeking jobs and courses seeking supers

SAGINAW, Mich.— Executive Golf Search Inc. will select and place golf course superintendents who wish to further their careers.

The company's two major goals are to identify the most highly qualified person for a given position and to assist superintendents in improving their positions.

Initially, the corporation is operated by two well-known golf experts, Gerald L. Faubel, CGCS, and Dr. Kenyon T. Payne.

"We're trying to develop a systematic way of helping clubs to hire the right individual," says Faubel, former president of the Golf Course Superintendents Association of America (GCSAA). "People in our industry have a tendency to move rather frequently. And at most courses, there's no real stability among those hiring the superintendents. So we hope to work to determine the needs of the individual courses."

Faubel says there will be no conflicts with superintendents who already work for courses. Executive Golf Search will strictly adhere to the code of ethics of the GCSAA.

"We're being accepted extremely well," Faubel says. "Superintendents are very enthusiastic, because we are stressing professionalism."

Designer/builder Robert Trent Jones, one of the people who originated the concept of such an organization, notes: "The importance of having the right golf course superintendent of a given club cannot be over-emphasized. Indeed, a club's very success depends, for the most part, on the professional and personal qualities of the superintendent."

Jones has given his personal encouragement to the two principles and the organization's concept.

For more information, write Executive Golf Search, 699 Westchester, Saginaw, MI 48603 or phone (517) 797-0677. □

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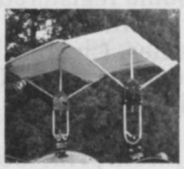

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NEWS BRIEFS

RISE CONFERENCE... Responsible Industry for a Sound Environment (RISE) will hold its fall conference Sept. 7-11 in Washington, D.C. For more information, contact RISE: (202) 296-6085.

POA BIOLOGICAL...A company called Myco-Gen in San Diego has purchased the patent rights from Michigan State University's Dr. Dave Robinson for a biological *Poa annua* control product. "We're evaluating it in 14 states this year under very strict guidelines imposed by the Animal & Plant Health Inspection Service (APHIS)," says Dr. Hugh Crowley, Myco-Gen's manager of herbicide development. "Next year, we hope to look at it under more real-world conditions. To say we'll have limited commercial utilization (of the bacterium *Xanthomonas campestris*) by 1993 is a stretch, though it's performed pretty well so far."

NOT RECYCLABLE?... The Toro Company has filed a lawsuit against Fuqua Industries. The suit charges that Fuqua's simulation of Toro's trade dress and use of the word "Recycling" and other variations of the word "Recycle" in connection with its advertising and sale of Snapper Power mowers infringes on Toro's "Recycler" trademark.

ENDANGERED SPECIES... According to the Golf Course Superintendents Association of America (GCSAA), the EPA is consulting with the U.S. Fish and Wildlife Service to determine whether some registered uses of 31 pesticides need to be limited in order to protect endangered species. Chemicals expected to be involved: Orthene, Turcam, Dursban, Treflan, Team, Phostoxin and others.

A PASSING... Memorial contributions for Josephine Davids, wife of Clarence Davids Sr., can be made to Southwest Chicago Christian School, 12001 S. Oak Park Ave., Palos Heights, IL 60463. Mrs. Davids passed away April 28 at the age of 66. She was co-founder and co-owner of Clarence Davids & Co., Blue Island, Ill. who preferred to stay in the background but nonetheless made a forceful impact on the multi-million-dollar company.

RENTING HEALTHY PLANTS...A program for renting infrared plant health stress monitors has been devised by Conservation Technologies. Cost is $295 per month, which can be applied toward purchase. For more information, contact the company at 17779 Main St., Suite D, Irvine, CA 92714; (714) 251-1210.

PESTICIDES

Malathion uses for turf part of reregistration

WAYNE, N.J. — The Malathion Reregistration Task Force will support turf uses for malathion insecticide, although many other currently-labeled uses will be dropped.

"In deciding which uses to support, we concentrated on what our customers demanded and on the largest uses," says Charles J. Galley Jr., chairman of the task force.

The task force is composed of the two worldwide manufacturers of the popular insecticide: American Cyanamid and Cheminova A/S.

"Excessive cost was the deciding factor in limiting the number of uses supported," adds Galley. "The scientific and economic requirements for just one new use with one formulation at one use rate for one crop for one target insect will cost more than $100,000."

Malathion is a low-toxicity organophosphate used to control mosquito, grasshopper, locust and boll weevil populations. Labels for ornamental flowering plants, ornamental lawns and turf are among 68 uses expected to be reregistered. □

EVENTS

Expo '91's commercial demo area is sold out

LOUISVILLE, Ky. — The outdoor demonstration area for commercial equipment at the International Lawn, Garden & Power Equipment Expo (Expo '91) has been expanded and sold out.

"We are going to do everything we can to attract and build on the ever-growing number of Expo's commercial exhibitors and their customers," says Dennis Dix, president of the sponsoring Outdoor Power Equipment Institute, noting increased sales of commercial equipment.

"We are delighted," adds show director Warren Sellers, "with the response Expo has received from manufacturers of commercial products. Preliminary pre-registration figures show that attendance in commercial categories may be up this year as well."

Expo '91 will be held at the Kentucky Fair & Exposition Center here, July 28-30. Pre-show seminars for commercial end-users will be held Saturday afternoon, July 27.

Pre-registration for the show and seminars is free. For those not pre-registered, there will be a $10 fee at the door. To pre-register, call the Expo office at (800) 558-8767. In Kentucky or outside the U.S., call (502) 473-1992. The fax number is (502) 473-1999. □

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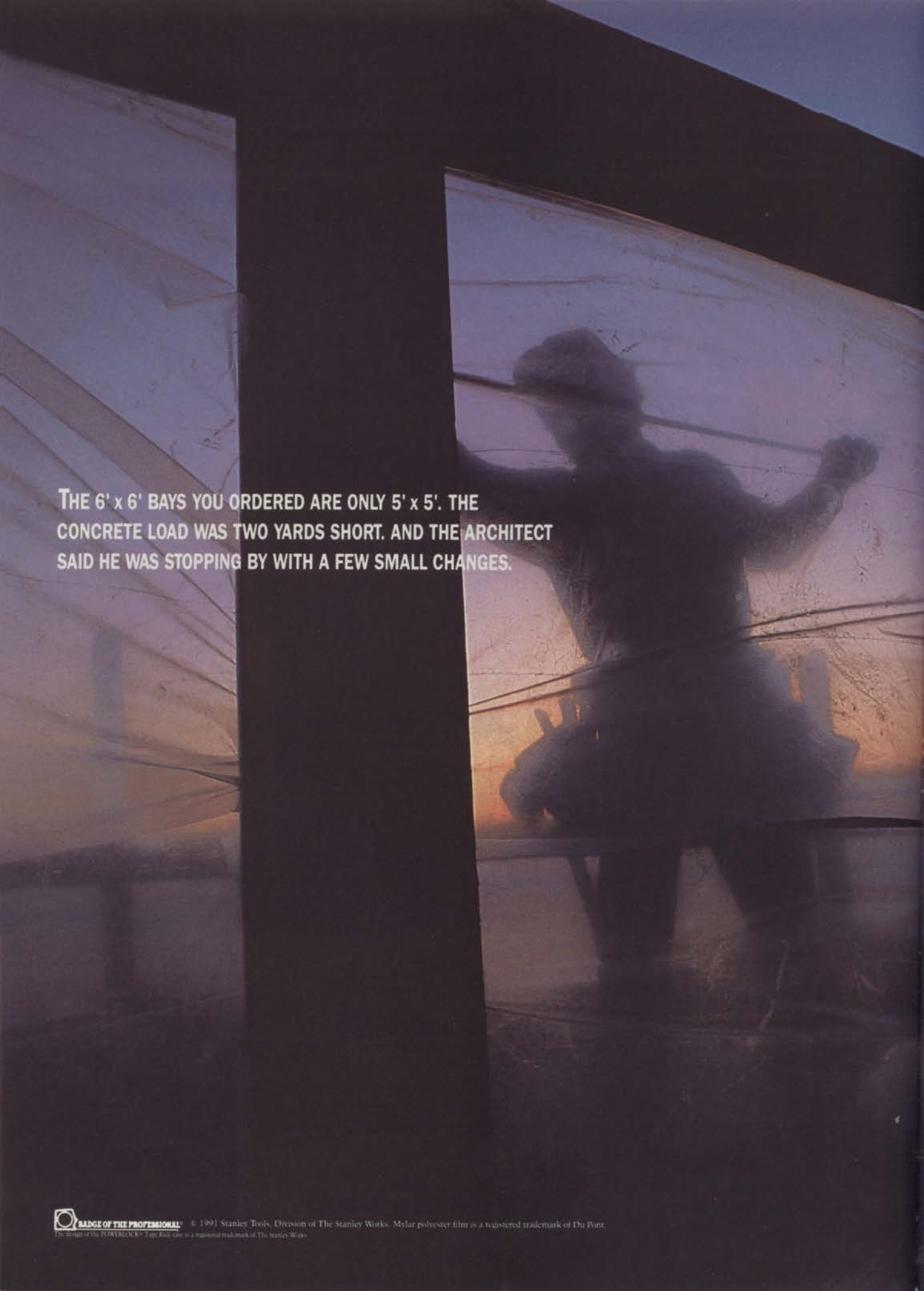
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INFO-CENTER

SPRAYER CALIBRATION...A 16-minute, single-projector slide presentation entitled "Calibration of Turfgrass Sprayers" is now available. Included is a narrative tape which helps the observer walk through the entire calibration process. For more information, write to Spraying Systems Co., Agricultural Division, P.O. Box 7900, Wheaton, IL 60189.

IPM NEWSLETTER..."Landscape IPM Updates," a bi-monthly newsletter, contains the latest IPM information and product reviews, along with providing ideas for more efficient and safer pest management. Subscriptions are $36 per year. For more information, write Larry Hollar, "Landscape IPM Updates," P.O. Box 309, Mt. Home, NC 28758.

SAVE THE ENVIRONMENT... An excerpt from Laurence Sombke's latest book is the basis for "30 Ways to Save the Environment," a *free* pamphlet from Garden Way, manufacturer of Bolens and Troy-Bilt outdoor power equipment. For a copy, write Garden Way at 102nd St., 9th Ave., Troy, NY 12180.

ALCA MEMBERS... The Associated Landscape Contractors of America (ALCA) has released its 1991 membership directory. Copies are $25 plus $1.50 for shipping. To order, call ALCA at (703) 241-4004 or write 405 N. Washington St., Suite 104, Falls Church, VA 22046.

FOR HAZARDOUS MATERIALS...A Hazardous Material Program Kit is designed to help employers comply with all five of OSHA's Right-to-Know requirements. Request a *free* 1991 Master Catalog from Direct Safety Co., 7815 S. 46th St., Phoenix, AZ 85044; (602) 968-7009.

WATER CONSERVATION TIPS..."A Water Conservation Handbook, Your Guide to Efficient Irrigation" is available through Pepco. Illustrated sections include drip irrigation, micro-irrigation, laser technology), the handbook is available by calling (800) 247-8138. Services, Penn State University, 119 Ag Admin. Bldg., University Park, PA 16802.

LYME DISEASE PREVENTION..."Outsmarting the Deer Tick" is a video recently released by Penn State University that covers prevention, personal protection and tick control of Lyme disease. Send $35 to Ag Information Services, Penn State University, 119 Ag Administration Building, University Park, PA 16802.

PRODUCTS

Here's a win-win situation: organic, synthetic fertilizer sales keep everyone happy

CLEVELAND—Here's an idea that can't miss: sell both natural organic and synthetic fertilizer, and you win either way.

Steve Fesperman, vice president at Koos, Inc., says that the professional market is starting to sell both, especially when more customers show interest in "natural" products.

Selling organics and synthetics can pay off when faced with skeptical customers. When comparing the two, Fesperman says customers often think they get a biased opinion from a straight chemical company or a straight natural organic producer.

"Our point," he says, "is to try and sort through the prejudice and get down to the fact of what is most beneficial."

Steve Fesperman

Although all natural organics are ideal for customers who shun chemicals, Fesperman warns that it will take a few weeks for results to show, due to the low nutritional value of the raw materials used.

Another benefit of the all natural organics is the microbial activity, which helps decompose thatch.

The all-natural organics are 80 percent water insoluble and have no salt. The downside is cost. The all-natural organics are very low in nutritional value and are twice to three times as expensive as chemical fertilizers, no matter who makes them. "We can buy granular urea for $180 a ton that's 46 percent nitrogen," explains Fesperman. "Leather tankage is $200 a ton, with only 11.8 percent nitrogen."

Fesperman says that the high price of current organic sources might force the market to seek out cheaper sources, such as seaweed or poultry waste products.

Prescription fertilizer blends, although not a new idea, are becoming more popular in both the do-it-yourselfer and commercial markets, according to Fesperman.

"Different prescriptions depend on different soil and weather conditions," says Fesperman. "Out of 80 different fertilizer materials, we'll encourage customers to use as much of the premium slow release material as we can."

In addition to weather and soil considerations, there are a series of questions to ask a customer interested in a prescribed mixture: Do you fertilize four to five times a year? Are you advertising that you're using totally natural organic fertilizer? What about weed control?

"The all-natural organic weed control method is to continue to feed the turf; the theory is that healthy turf crowds out the weeds," says Fesperman. "We eliminate the thatch layer and hopefully reduce the amount of insecticides and fungicides that would be necessary."

"There's nothing wrong with chemical fertilizers," says Fesperman, "for people who know how to use chemical fertilizers. If a homeowner is not going to follow the label directions, no matter which product he uses, he needs to call (a professional)." □

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EVENTS

JULY

12-16: American Association of Nurserymen, Annual Convention, Walt Disney World, Orlando, Fla. Contact: A.A.N., 1250 I St. NW, Suite 500, Washington, DC 20005; (202) 789-2900.

14-16: Mid-Atlantic Nurserymen's Summer Trade Show, Baltimore Convention Center. Contact: Mid-Atlantic Nurserymen's Trade Show, Inc., P.O. Box 314, Perry Hall, MD 21128.

15-21: Arbor Day Institute Workshop, "The Technical Arborist," Washington, D.C. Contact: The Institute, P.O. Box 81415, Lincoln, NE 68501-1415; (402) 474-5655.

18: Summer Field Day & Trade Show, Stadler Nursery, Laytonsville, Md. Contact: Landscape Contractors Association, 9053 Shady Grove Court, Gaithersburg, MD 20877; (301) 948-0810.

22-24: Residential Landscape Design Workshops, Virginia Polytechnic Institute. Contact: Robert McDuffie, (703) 231-7432.

24-26: National Fertilizer Solutions Association Round-Up '91, Indiana Convention Center, Indianapolis, Ind. Contact: NFSA, 339 Consort Dr. Manchester, MO 63011.

25: PGMS Facilities Management Seminars, Ohio State University. Contact: PGMS, 10402 Ridgland Rd., Suite 4, Cockeysville, MD 21030; (301) 667-1833.

27-30: Outdoor Power Equipment Institute Expo '91, Louisville, Ky. Contact: OPEI, 6100 Dutchman's Lane, Louisville, KY 40205; (800) 558-8767.

30: Midwest Regional Turf Foundation Field Day and Show, Purdue University Agronomy Research Center, West Lafayette, Ind. Contact: Dept. of Agronomy, Purdue University, West Lafayette, IN 47907; (317) 494-8039.

31: University of Georgia Turfgrass Field Day, Georgia Experiment Station, Griffin, Ga. Contact: University Extension Service, Landrum Box 8112, Georgia Southern University, Statesboro, GA 30460.

31: Connecticut Tree Protective Assoc. Summer Meeting, Aqua-Turf Club, Plantsville, Conn. Contact: CTPA, 18 Washington St., Rocky Hill, CT 60607; (203) 257-8971.

31-Aug. 2: American Sod Producers Association Summer Convention and Field Days, Red Lion Hotel/Lloyd Center, Portland, Ore. Contact: ASPA, 1855 Hicks Rd., Rolling Meadows, IL 60008; (708) 705-9898.

AUGUST

2-4: Southern Nurserymen's Association Horticultural Trade Show, Georgia World Congress Center, Atlanta. Contact: Southern Nurserymen's Association, 1511 Johnson Ferry Road, Suite 115, Marietta, GA 30062; (404) 973-9026.

4: Perennial Plant Symposium, Farmington, CT and Long Island, N.Y. Contact: Dr. Steve Still, Perennial Plant Association, 3383 Schirtzinger Rd., Hilliard, OH 43026; (614) 771-8431.

6-8: Field Diagnostic Course for Turfgrass Managers, Cornell University, Ithaca, NY. Contact: Joann Gruttadaurio, (607) 255-1792.

12-13: Int. Soc. of Arboriculture Conference and Trade Show, Adam's Mark Hotel, Philadelphia, PA. Contact: ISA Trade Show, P.O. Box 908, Urbana, IL 61801.

14-15: "Insect and Disease: Diagnosing, Managing and Complying with Regulations," sponsored by the Ball Institute. Contact: The Ball Institute, (708) 231-3600. □

MANAGEMENT

Listen, observe to sell

LAS VEGAS, Nev.—Common sense, plain speaking, listening and observing are keys Mark H. McCormack has found helpful during his career.

In remarks made at the International Golf Course Conference and Show, McCormack said it's the little things that mean a lot and often make the deal.

Mc-Cormack, a Cleveland attorney and head of International Management Group, said that to be a successful businessman you must listen aggressively: to content, tone, choice of words and any indicators which sharpen connections.

Observe aggressively, have a good sense of humor, and include the tool of silence in negotiations, the sports management specialist said. The long pause never goes long unfulfilled, McCormack concluded. □

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Figure your savings at the new lower price. Then see your dealer or retailer to save on Roundup.

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COVER STORY

SELL... INSTALL... MAINTAIN

It's not the easiest job in the world selling irrigation systems to commercial establishments in the East and Midwest. But it can be done, as this dealer's representative has found out.

by Jack Simonds, contributing editor

The assignment: Market irrigation systems in an area which usually enjoys a robust mixture of sunshine and rainfall. The added challenge: A good moisture-retaining clay soil also is common throughout northeast Ohio.

It isn't the easiest way to go for George Reese, director of irrigation sales at North Coast Distributors. But he hasn't done badly on his 22-county beat. Not for an area where commercial and residential irrigation systems are sometimes considered a "prestige" item in new constructions.

"When I started 15 years ago, irrigation was not exactly a household word," remembers Reese. "This is a tough market to sell. Irrigation is not considered a 100 percent necessity item here when compared with other states in the South and West.

George Reese: irrigation systems not just for prestige clients.

"It has been a very difficult road. What you sell is a concept, and the timing has to be right," says Reese on a warm, moist spring day where every planting in sight is lush and green. "You're not handed anything in this market. You have to hard work at it," he says.

Many projects are already under his belt and others on the way. But none is likely to compare with Reese's largest ongoing design job: equipping Goodyear Tire and Rubber Co.'s world headquarters in Akron, Ohio with as much irrigation as needed on 400 of the firm's 600 city acres.

Underground obstacles

Reese works closely with Goodyear's grounds maintenance manager Tom Riccardi, a veteran green industry

Green space along the Ohio Canal is fully maintained by Goodyear maintenance crews. The canal is one of three sources of water for irrigation and plant operations.

professional who oversees all outside areas around the complex. The two have teamed since the early 1980s; to date, installing 25 miles of piping, 4,400 sprinkler heads, 50 miles of wiring and 40 automatic control centers on 100 acres.

"Tom first had to sell the idea of irrigation to Goodyear's corporate side. I sat down with Tom and we laid out a presentation package; a five-year plan," says Reese of the $2.5 million ongoing project.

"I sold Goodyear with the image of the outside corporate grounds; the psychological image Goodyear projects as people pass by. The key was the beautification of Akron and it is nice to see a company like Goodyear take this kind of responsibility toward the community," says Reese.

Sloping green acreage alongside the Goodyear Technical Center headquarters is well-irrigated. The reclaimed area once sported coal piles and unused rail tracks.

Tom Riccardi: maintain quality control.

Goodyear green spaces, situated directly in the center of Akron's east side with other rubber company giants as neighbors, stretch over a mixed terrain with both sandy and clay conditions, high winds, rail tracks and a manmade canal, older unused buildings and old submerged building foundations—all to be landscaped and kept green by Riccardi and his 16 full-time and 10 seasonal crewmembers. He credits the success to his crew, many of whom were former production workers now retrained in landscape maintenance techniques.

"Our main philosophy is to have a well-manicured lawn throughout the complex. We always go for total quality control. In order to do that, we need as much of the area irrigated as possible. We try to keep everything green under very harsh urban conditions. Goodyear is committed to this," says Riccardi.

Sandy soil gets less attention

Although their initial goal was to keep things as standardized as possible, Reese and Riccardi found they must be flexible in design specifications. In some shallow sandy soil conditions, for instance, the two found a limited number of sprinkler heads works best.

Other areas dictated different responses. Green space around an employee parking lot, for example, requires sturdier golf course style heads to combat wind, heat and soil conditions and even vandalism.

The front of corporate headquarters, which stretches along a city block, is adorned by a half-acre flower bed which combines bulbs, ornamental shrubs and a Kentucky bluegrass blend found throughout the complex.

The irrigation system is supplied by five deep wells on Goodyear's property, the Ohio Canal or "Little Cuyahoga," as known locally, and city water. About two-thirds of the water comes from the wells and canal.

Reese and Riccardi continually find they must maintain an open mind while planning for each new irrigated area.

"Originally, we wanted to keep sprinkler heads standardized, for instance," says Riccardi. But differing soil levels and compositions, proximity to trespassers and vandals, closeness to employee parking lots and even turf installations over razed building foundations all played a case-by-case role in setting out systems.

In some areas, sturdier golf course heads proved more effective; others, like the high ground adjacent to Goodyear's Technical Center, needed 240 smaller heads spaced 38 feet apart to combat wind drift.

That 13-acre green space adjacent to Goodyear's Technical Center was the first area tackled by Reese and Riccardi in 1983. It has proved successful. Once not-so-attractively adorned with rail tracks and coal piles, the site now gently slopes to corporate headquarters and shores up to a brick promenade complete with a modernistic water fountain.

Another four-acre area has been reclaimed as a buffer zone between nearby interstate traffic and Goodyear's five-story machine shop. That site posed special problems because a massive building foundation still sits beneath the surface and in some spots, topsoil is as shallow as two inches.

Irrigation is also in place on the company softball field, which hosts 22 day and night games a week in peak season.

"Even with Goodyear's wells and river, water conservation is important," says Reese. "The investment here is in landscaping, trees and plantings. You've got to deliver that water or you may totally lose it all."

The next challenge for Reese and Riccardi will be irrigation for Goodyear's test track, where tires are driven under different wetness conditions to gauge responsiveness. The system could play a part in varying wetness levels for the pavement.

Riccardi says the conversion to underground irrigation has "absolutely paid for itself," with lower man-hours and water use.

Why install irrigation?

Reese works closely with area landscape contractors, providing training seminars for Toro's systems. It is no accident that 30 area landscape contractors recently took intensive training to become familiar with the Toro line.

"There needs to be education to the end user (to show) irrigation is more than a prestige item. Irrigation increases the value of a home and preserves the investment in landscaping," says Reese. **LM**

BIDDING TO WIN IN A SOFT ECONOMY

Recession thinking increases the demand for holding or reducing the cost of maintaining property. To win and retain projects, look for your 'competitive advantage,' and modify your service strategy.

by Phil Christian

Competitive bidding should be a part of your overall marketing strategy. But it must be managed differently in a down-turned economy to maintain profits.

The real estate industry has been going through an economic adjustment, and the current economy-wide recession has compounded its problems. So landscape service contractors serving the real estate industry need to reevalutate bidding and marketing strategies to fit the needs of the "new" real estate industry.

In a growing economy, where there is enough work for everyone, we develop bidding habits that soon become rote. These practices may not serve us well in a slow- or no-growth economy.

Buyers looking at price

Some modern economists tell us that recession begins with a change in the buyer's state of mind. This state of mind has real consequences. Sales drop, people lose their jobs, competition becomes more intensive, and the professional buyer becomes even more "price sensitive."

Fortunately, this price pressure is accompanied by other more positive symptoms of recession thinking, the most important of which is the tendency for property managers to be more open-minded or less resistant to change.

The complaint heard most in times of recession is from green industry contractors who say, "This year all our projects are being rebid, even the negotiated jobs with our oldest and best customers."

If the contractors are correct—and they usually are—most of the work in your area will be bid or rebid in this coming year. How does that new reality of recessionary times affect your company?

Make a trade-off

An average-sized full-service contractor bills $500,000 a year from 24 projects. This contractor should renew, without bidding, at least 33 percent of his jobs, or about eight projects. If this average contractor is in a $5 million dollar market, he has a market share of about 10 percent. That means they must protect eight of their own jobs. But there are 80 new jobs belonging to their competitors that are available to bid. Not a bad trade-off in terms of competitive position.

Saving the project

Before getting involved in bid strategy for new work, let's review a plan to save those jobs that are now at risk because of recession thinking.

It is best to offer your customer a plan before you are notified of a rebid situation. Keep in mind that the drive for a better price is accompanied by an open mind, or less regard for the status quo. This is your opportunity to offer a proposal to cut the cost of maintaining this property while protecting your own profit and the quality of the landscape.

This is a good time for creative change in landscape management. One effective method of approaching customers is to make an appointment, express your understanding of their situation, and offer your solution. For example, you could say to your customers:"We heard about your recession, and we have developed a plan to reduce your total cost for maintaining this project."

Cutting to win

- In the past you may have offered four and five rounds of lawn service over 100 percent of the turf area. Modify that program. Apply five rounds to the most visible portion of the landscape, four rounds in front of the units, and three rounds between the back door and the creek.
- Offer flexible mowing programs or frequencies that vary with the use and location of the turf area. That open field behind the units designed for future expansion may be reduced from 30 to six mowings per season.
- Reduce the weed control in the low-visibility and reduced-maintenance areas. Eliminate or cut down the applications of nitrogen in the early spring rounds, and match the fertility programs to meet the turf's function.
- Stop hand-watering and over-watering with irrigation systems. Cut the water bill and the labor/maintenance cost.
- Reduce or stop blanket applications of post-emergent herbicides.
- Stop shearing the shrubs. Prune them correctly, twice each year.
- Omit spring fertilization of trees and shrubs, and skip or reduce the fall fertilization to every other year.
- Get rid of those thick, sculptured, over-mulched beds. Mulch twice a year, only three inches thick, in a flat, natural contoured shape.
- Stop pulling weeds by hand. Use pre-emergents and increase the application frequency of contact herbicides.
- Reduce trimming with a nylon cord trimmer by establishing no-grow areas around the buildings. Reshape the mulch beds to eliminate small trim areas.
- Do not replace 100 percent of the plant material lost last winter.
- Cut your crews of four and five people down to two and three people, and operate more efficiently.

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Choose the right projects

No matter how much work is available, you can only bid a limited number of projects in a given time frame. You need a selection criteria or procedure, especially if you intend to get the "plum" jobs.

The "plum" jobs are those that fit your company's experience, in terms of size, quality, location, timing and competitive advantage.

A good information system is essential to a good selection process. You know your market well enough to identify the projects you should pursue in terms of size, quality location and timing.

To exercise your competitive advantage, look for projects that have been maintained by the same contractor for two or more seasons and are over-maintained.

Look for the projects that are maintained incorrectly: where a 21-inch push mower is used on the large turf area in front of the building, or where a crew of six is hacking away with nylon cord trimmers.

Look for the large properties that have been maintained as though they were small properties. Seek out the very large properties that would be more effectively maintained with two full time people on-site, rather than a big, expensive mobile crew.

Bidding to get the work

The landscape industry's bidding process—as we know it—is generally an informal one, with few hard-and-fast rules. The buyer views the process as one of choice, where the contractors who want to do business with his company compete informally based on price.

In the present tight real estate economy, you should bid each project to get it! Casual bidders, who bid on everything and hope to get lucky, soon earn a reputation, and are not taken seriously, even when they are low.

If you do not have a good chance of being the low bidder on the base bid or the bid documents supplied by the buyer, you should then bid an alternate program, incorporating the changes you recommend for maintaining the property. In other words, if you cannot be among the low bidders, the least you can do is disrupt the process so no one knows who the low bidder is without talking with you. When you are successful in landing a job based on an alternate bid, the ones who lost will complain about the "apples to apples" comparisons. You are free to tell them that all bidders have the same opportunity—and, perhaps, obligation—to be creative when it is in the best interest of the customer.

Cut profits last

Do not automatically reduce your profit to negotiate or bid a lower price for commercial customers. All costs should be trimmed first. If your adjusted profit is higher than 25 percent of the total cost, including overhead, then some reduction could be in order. Otherwise, hold the profit and recommend changes to reduce all other cost. Remember, this is their recession, their property and their choice to reduce the cost. You have the responsibility to respond to their needs. But you are not obliged to fill their needs at the expense of your profits. **LM**

Phil Christian of Alpharetta, Ga., is a green industry consultant with pdc consultants.

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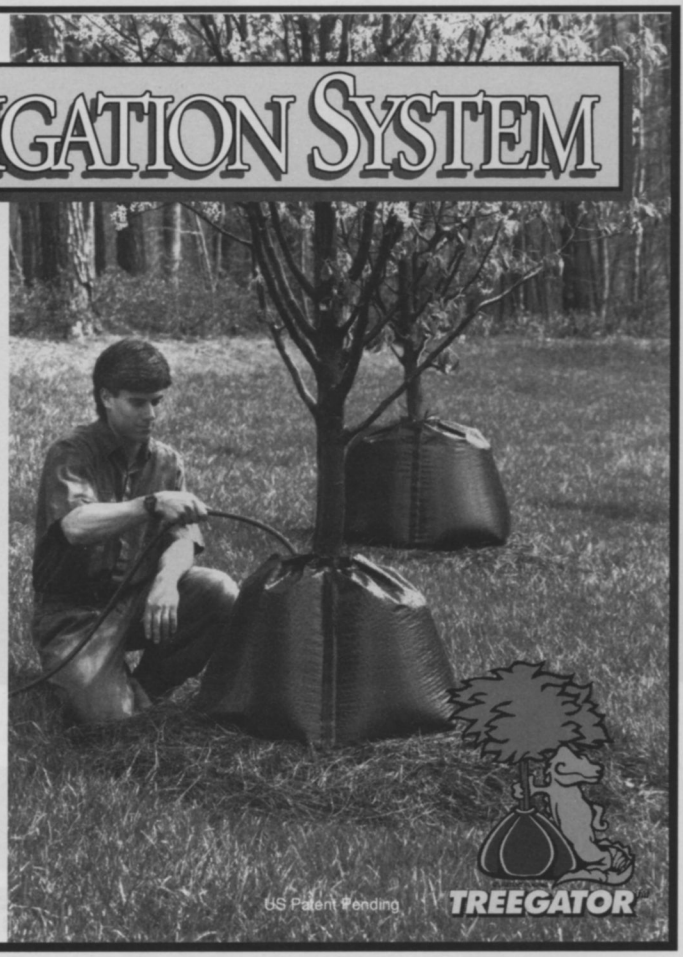

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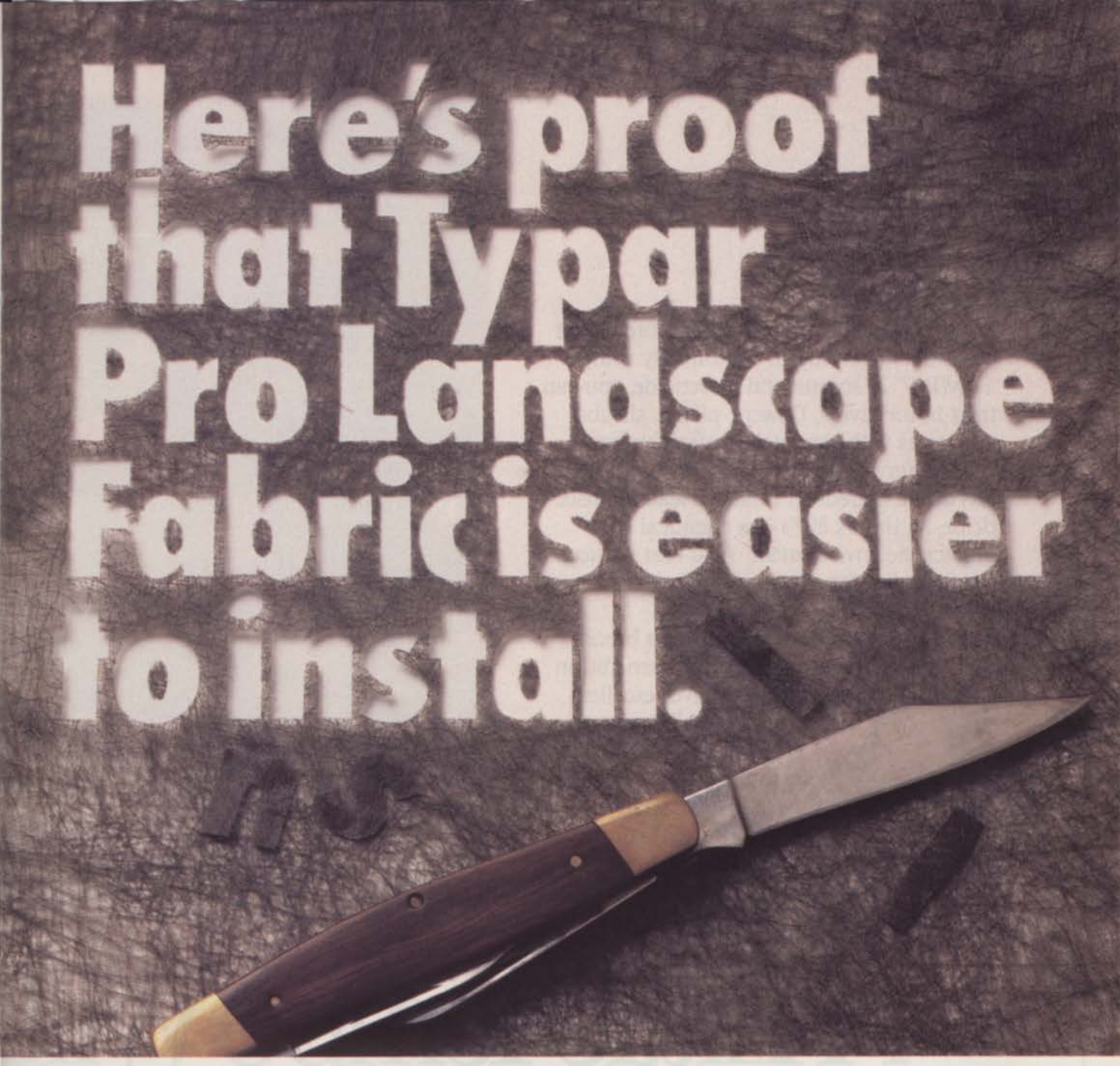

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And again, 80% less chemical means less handling, mixing and disposal hassles, as well as less impact on the environment.

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TEMPO effectively controls surface and leaf-feeding pests like tent caterpillars, Japanese beetles and bagworms.

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chemical into the air, TEMPO also costs less than other leading insecticides.

In addition, TEMPO is compatible with all types of spray equipment and won't cause downtime due to clogging.

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With 80% less active ingredient, it only takes a little TEMPO to cover a lot of ground. And that has big advantages for you and your customers.

For more information, contact the Mobay Corporation, Specialty Products Group, Box 4913, Kansas City, MO 64120 (800) 842-8020.

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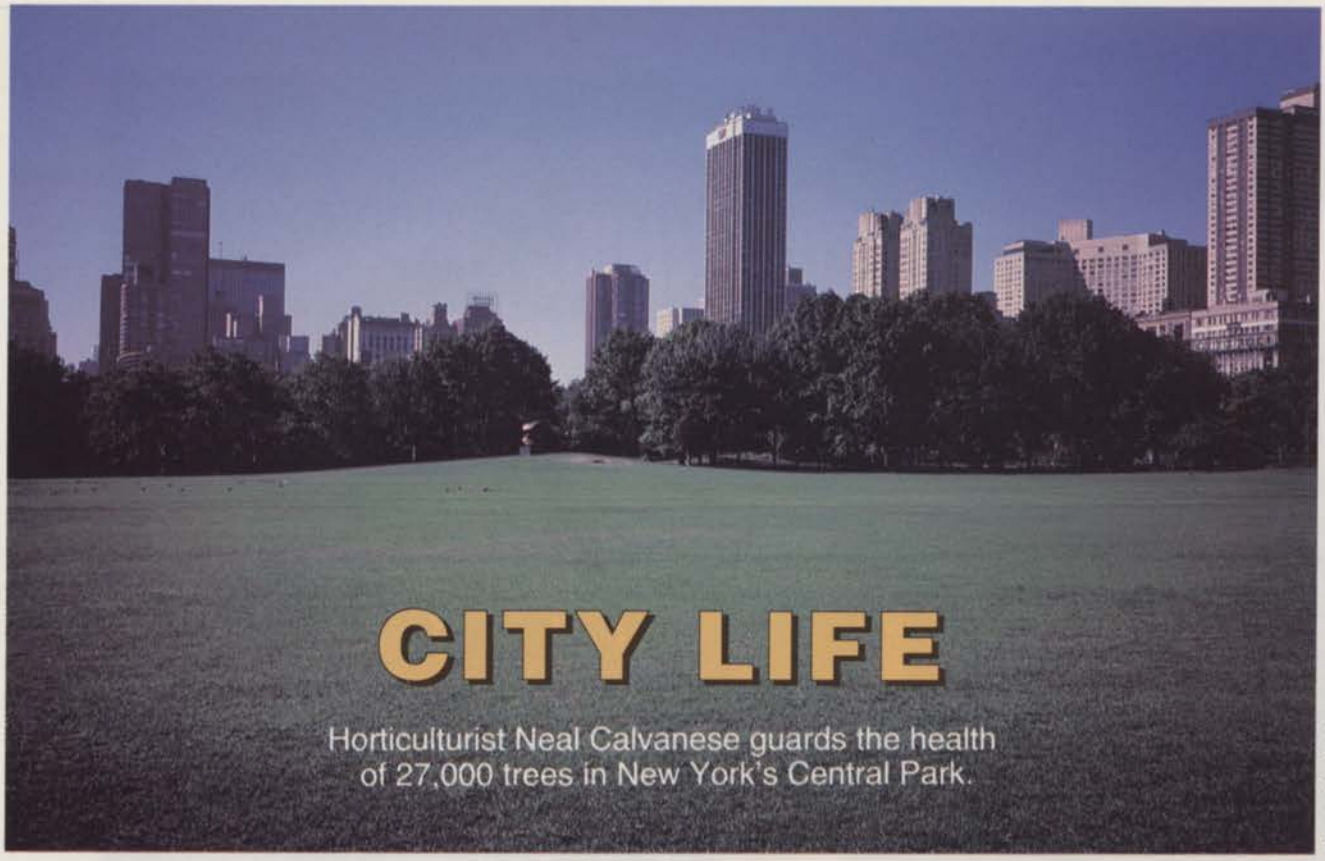


CITY LIFE

Horticulturist Neal Calvanese guards the health of 27,000 trees in New York's Central Park.

Central Park Conservancy

"When I tell people that America's largest and most important stand of American elms thrives in the center of Manhattan, they sometimes look at me like I'm crazy," says horticulturist Neil Calvanese.

"But in Central Park, there are 2,500 elm trees, of which more than 1,800 are American elms–one of the last remaining perfect stands of American elms anywhere–and the second dominant species of trees in the park, the first being black cherries." For Calvanese, Director of Horticulture for New York City's Department of Parks and Recreation, elms are a passion.

"Whether American, English or Chinese—and we do have many varieties in the park—they are a magnificent tree," says Calvanese. "Their unique arching forms great cathedral-like spaces. They have a wonderful vase shape, pendulous limbs, full branches and their leaves provide beautiful color, not only in the fall, but all year long. They are truly a tree for all seasons."

Help from private sector

Efforts to keep the elms—as well as the parks 25,000 other large trees—healthy and well puts heavy demands on Calvanese and his staff who care for Central Park's vulnerable collection of trees.

"During the New York City fiscal crisis 10 years ago, there were only two gardeners maintaining the hundreds of acres that make up Central Park, one of the largest urban green spaces in the world," says Calvanese.

"Today, thanks to over 20,000 donors who contribute funds each year to the Central Park Conservancy, I have a staff of as many as 45 gardeners who fertilize, seed and mow the meadows, maintain ballfields, weed, mulch, prune, plant and care for our trees."

The effort to keep Central Park's elms healthy is also made more difficult by the scourge of Dutch elm disease. "While the disease has decimated the American elm population throughout the country," says Calvanese, "fortunately, due to close monitoring and careful maintenance, few of our Central Park elms have been lost."

"The disease is difficult to control because it is a fungus that develops inside the tree's xylem, the veins carrying water to the crown of the tree.

While there is little that can be done once Dutch elm disease has progressed into the main stem of a tree, Calvanese uses instant photography to record its effects. "By taking a series of instant photos and studying them over a period of time, we gain information on how tree diseases spread and how their effects may vary from one species of tree to another.

Keeping a record

"Also, when a tree needs to be removed due to disease or damage, we need to document the reason for its removal. New Yorkers are very protective of Central Park, and many of them have a favorite tree of trees, and we often hear from them when they discover a tree has been removed. With a Polaroid photo in our file, we can indicate the tree was a hazard due to disease, rot or storm damage. We don't like to have to take trees down, but when it becomes necessary, at least we can show a tree lover why his or her favorite had to go."

The big advantage in using instant photos, says Calvanese, is that it makes an on-the-spot record. "There's no waiting to see if you got the picture you needed. You know instantly, and that's important when a tree is about to go down and you're not going to have a second chance to get that photo you need."

Calvanese is quick to add that park policy calls for replacing—if possible—removed trees with another tree of the same species and, hopefully, of the same size.

Instant photography also helps when buying replacement trees. "Much of my time is spent dealing with commercial nurseries, from whom we buy replacement stock for the park," says Calvanese. "We will visit a nursery, take a look at their

inventory, and take instant photos of those trees we think may be suitable for purchase.

"The instant photos are brought back to my office, where they are reviewed by the Conservancy's land scape design office. Once the trees in the photos have been approved—their shape, color and size are all taken into consideration by our designers prior to purchase and installation—we issue a purchase order."

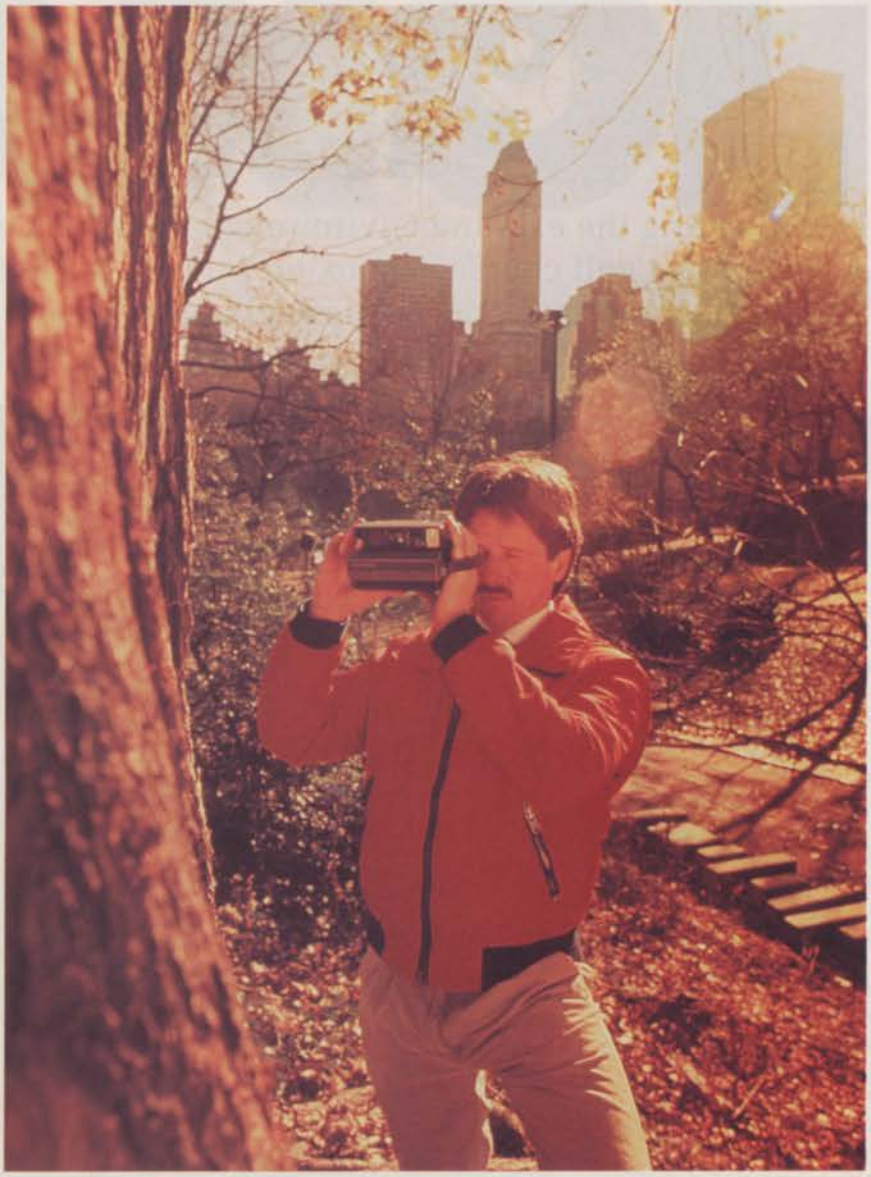
28 million feet

Approximately 14 million people walk the park each year. The traffic makes for a severe soil compaction problem.

"We continually aerate the soil in heavy-use areas with a machine that penetrates three to four inches into the dirt, breaking it up so that air and nutrients can get into the ground, allowing it and the plants it supports to breathe."

'By taking a series of photos over time, we gain information on how tree diseases spread, and how their effects vary from one tree to another.'

—Neil Calvanese
Central Park horticulturist



With instant photography, Neil Calvanese documents tree problems on the spot. (Photo by Jake Wyman)

Calvanese says it is this constant attention that keeps Central Park looking as green and beautiful as it does. "In addition to aeration, the Conservancy maintains an ongoing program of fertilizing, overseeding, irrigation and pruning. You really have to keep at it all the time. If we were to discontinue our efforts for only one year, Central Park would, in many places, become a dust bowl, due primarily to its heavy use by the public."

However, both public events as well as special uses for which permits must be obtained—movie shoots, magazine photo sessions, construction projects—mean Calvanese again turns to his instant camera for help.

"Occasionally, we need to produce evidence that the condition of a section of the park was in good order prior to damage that may have resulted from a permitted activity. In the case of a disagreement, having instant photos showing 'before and after' conditions can be very helpful."

Calvanese says the birth of the Central Park Conservancy in 1980 has helped the park to flourish today. "The Conservancy is a non-profit organization which works in partnership with the New York City Department of Parks and Recreation. During the past 10 years, the Conservancy has raised $64 million for the upkeep of the park and has, in addition, become a national model for such public and private partnerships."

Calvanese himself has been working at Central Park for nearly 10 years. "After graduation from The State University of New York at Farmingdale with a degree in arboriculture, I started my job search. One day, while unemployed, I visited Prospect Park in Brooklyn and saw a Camperdown, or 'weeping' elm. The tree was magnificent. It was at that moment I said to myself, 'this is it! I want to work with trees!' Not long after that, I started work as a tree-climber on the Central Park tree crew, going up into the trees to do whatever work was required."

Calvanese says that 10 years from now, "I'll probably be right here." Then he turns and looks out his small Central Park office window at a grove of majestic elms, their leaves fluttering in the slight breeze, their long limbs reaching to the sky.

"But I do see myself in the woods someday. Doing what? I don't know. Probably still helping to make sure trees grow up strong and healthy." **LM**

TO BUILD AND PRESERVE

Protecting the existing environment must be a major concern when planning a golf course expansion project. It's not an easy task, but an important one, as these planners recently found out.

by Jack Simonds, contributing editor

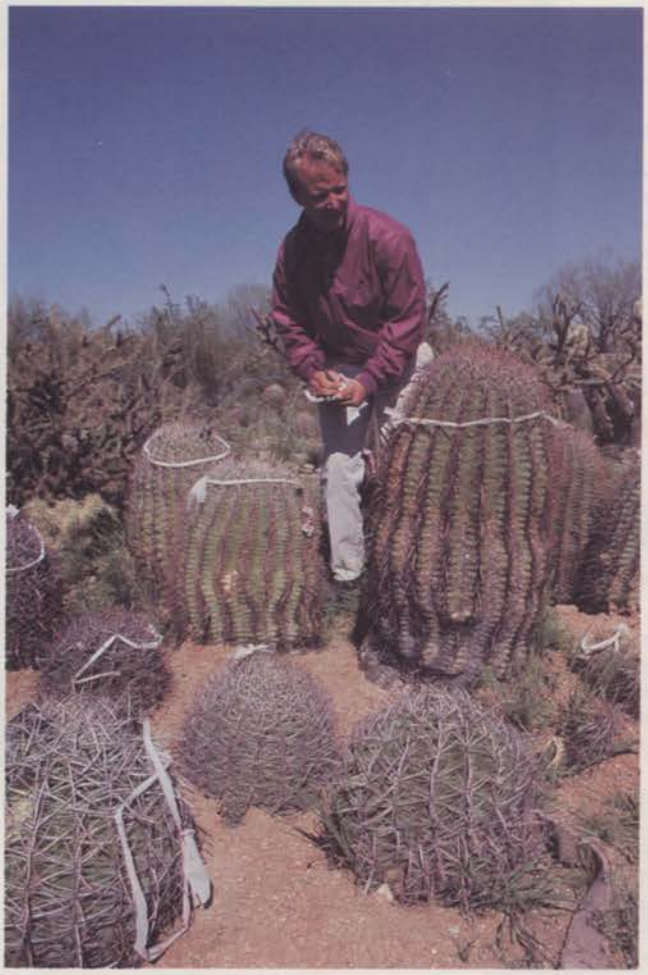
The Boulders, a $50 million showcase resort by Westcor—nestled on 1300 acres north of Phoenix—commissioned a nine-hole expansion last summer of its "target style" 27-hole course. It meanders through Ansel Adams-like rock formations and desert land marked with the unique saguaro cactus.

"To go in and match a golf hole to the natural terrain is the real challenge. More time was spent on that than will be to build the actual golf course," says project manager John Miiller.

Miiller relates how great pains were taken to gently remove mesquite, paloverde, prickly pear and acacia cat claw trees, hedgehog cactus and ocotillo shrubs to temporary nursery sites. The terrain's signature saguaro cactus plants, found only in the Sonoran Desert, were moved and transplanted once to areas out of golf play.

The precious and fragile nature of the saguaros made it necessary for only one transplant, project horticulturalist Dave Hutchinson believes.

"When we're dealing with something as fragile as the saguaros, we like to move them just once," Hutchinson says. Some of the majestic plants are up to 300 years old.



Marc Snyder takes a "cactus inventory." The plants are moved once and once only.

Working from nature's blueprint

Hutchinson, Miiller and course superintendent Marc Snyder began the work by taking inventory of all plant life in the area, noting the contours of the land for wash crossings and high ground to set up natural drainage.

"We just use the natural contours that exist," Snyder says. Rainwater collects at those wash crosses, and a few figure into the play of a hole.

An underground Rain Bird system provides irrigation in peak dry seasons. The state-of-the-art equipment closely monitors water use in a state with fairly strict water allocation restrictions. Submerged sprinkler heads deliver water in dry times.

"When we first started, we looked at the land and selected it first," says Miiller. "We decided: 'Here is where a green would fit; here is where a fairway should go; here is where it makes sense to do some planning from a desert standpoint."

Snyder agrees: "We have man coming into nature and building this (resort and golf) community. We want to live in harmony with nature and be sensitive to the environment. In everything we do, we want to be consistent in man and nature living in harmony. As a golf course superintendent, I'm proud of that."

Finding room for fairways

Course designer Jay Morrish also saw the advantage to incorporating rock formations and wash crossings into the expansion, but a bigger problem vexed him during several months of early design work.

"The big challenge for me was to determine how to get another nine holes in the site and be able to tie it all together," says Morrish, a Tulsa, Oklahoma course designer who works both solo and with professional golfer/course designer Tom Weiskopf. The problem, Morrish says, is that The Boulders complex—packed with 136 guest houses, two swimming pools, tennis courts, restaurants and other fineries—had not included more fairways in its original land plan.

"But now everything looks good and I'm very excited about it," Morrish says.

When plants are put back, Hutchinson notes that only vegetation indigenous to the High Sonoran region is included.

"There will be no new species

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whatsoever," he vows.

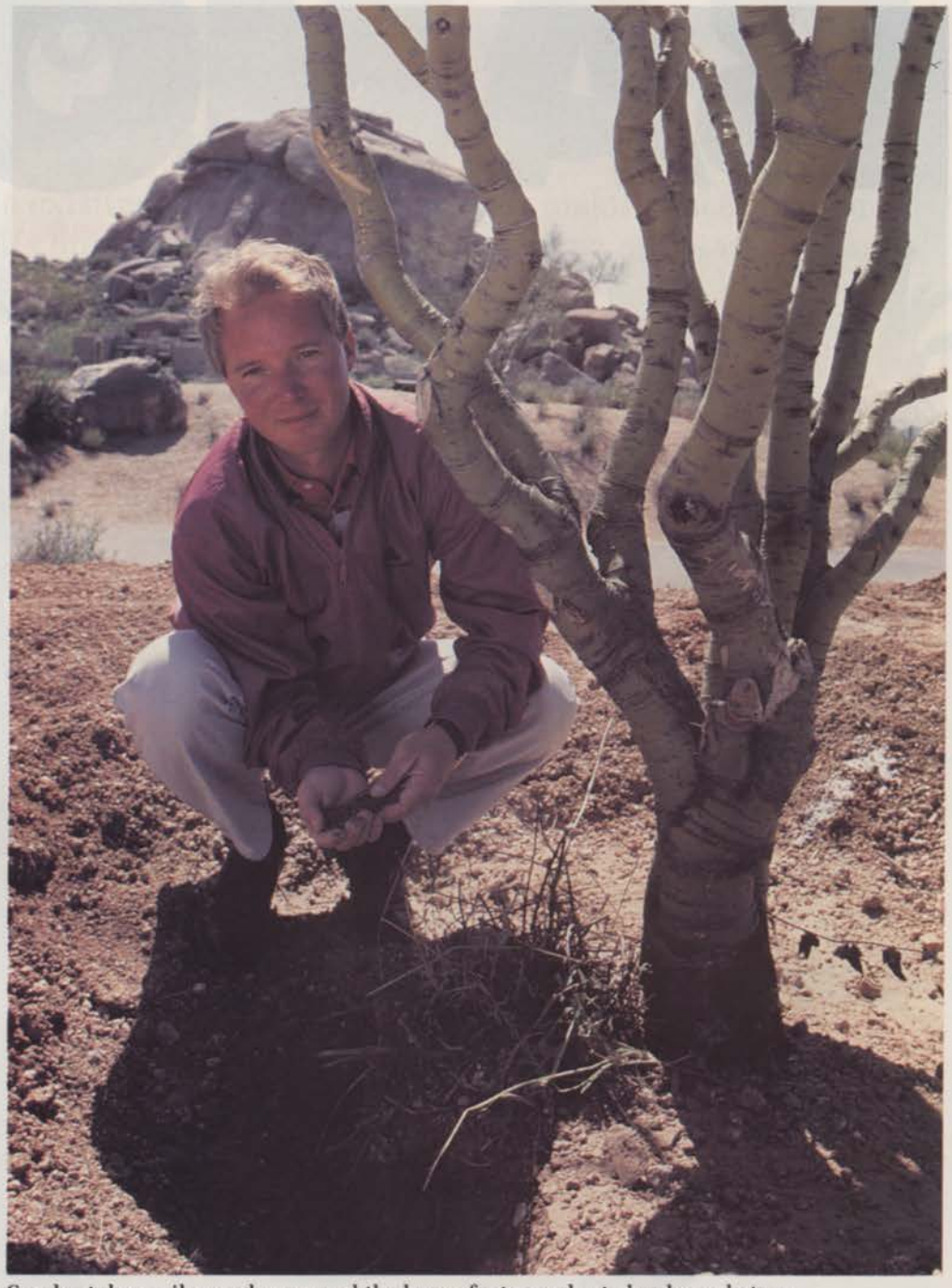
And the course itself?

"The best description I can give," Snyder says, "is that it is more of a target golf course. When you tee off, you cross an area of desert to get back to grass."

Most of the holes are islands of tees, fairways and greens; a few are complete in the traditional sense. Fairway landing space is about 300 to 400 feet across. Hazards include standard bunkers to give the hole shape. The austere rock outcroppings that give the area its haunting beauty and the exclusive resort its name also serve as challenging traps. Those outcroppings were formed 12 million years ago.

"The outcroppings and boulders fit right into the natural design," says Snyder. "We use them to our benefit."

Finish grading and grassing programs began in April; the new nine will open in mid-September. Grassing itself is a mixture of varieties and maintenance programs.



Snyder takes soil samples around the base of a transplanted paloverde tree.

Bermuda, rye and bentgrass

Snyder explains that fairways and roughs are seeded with a bermudagrass and overseeded with perennial ryegrass during peak dormant season in winter. Bentgrass is used on greens.

Snyder and his 36-man crew also maintain a 45-foot lip of desert around all green areas which serves as a buffer between playing surfaces and the Sonoran Desert proper.

"If someone hits it in there, they can play it out," he says, likening the buffer to out-of-play forest bed areas found on traditional golf courses.

"We don't want it to be too manicured. We just want that natural look and the manicuring we do is blended in with the desert that we don't maintain," Snyder says.

That 45-foot lip is maintained by pruning programs, plantings and timed pre-emergence herbicide sprayings. After that, the buffer is left to "Mother Nature taking its course," says Snyder.

Regional animals remain

All connected with the expansion agree that close care has been taken to insure the desert beyond is not disturbed. Wildlife like deer, coyote and hawks still call it home.

"When we're finished, we won't have to go in and repair the desert. We've changed only what we needed to change," says Snyder.

Hutchinson agrees: "We've made it so that revegetation by and large is not necessary. We're using those plants to create a habitat and maintain the integrity of the desert while adding to the experience of golf."

The Boulders Sonoran Desert resort itself has been designed to blend with the surrounding outcroppings and has received the 1990 Small-Scale Commercial/Retail Development Award for its planning design among other awards. About 90 percent of resort-owned land remains undeveloped. **LM**

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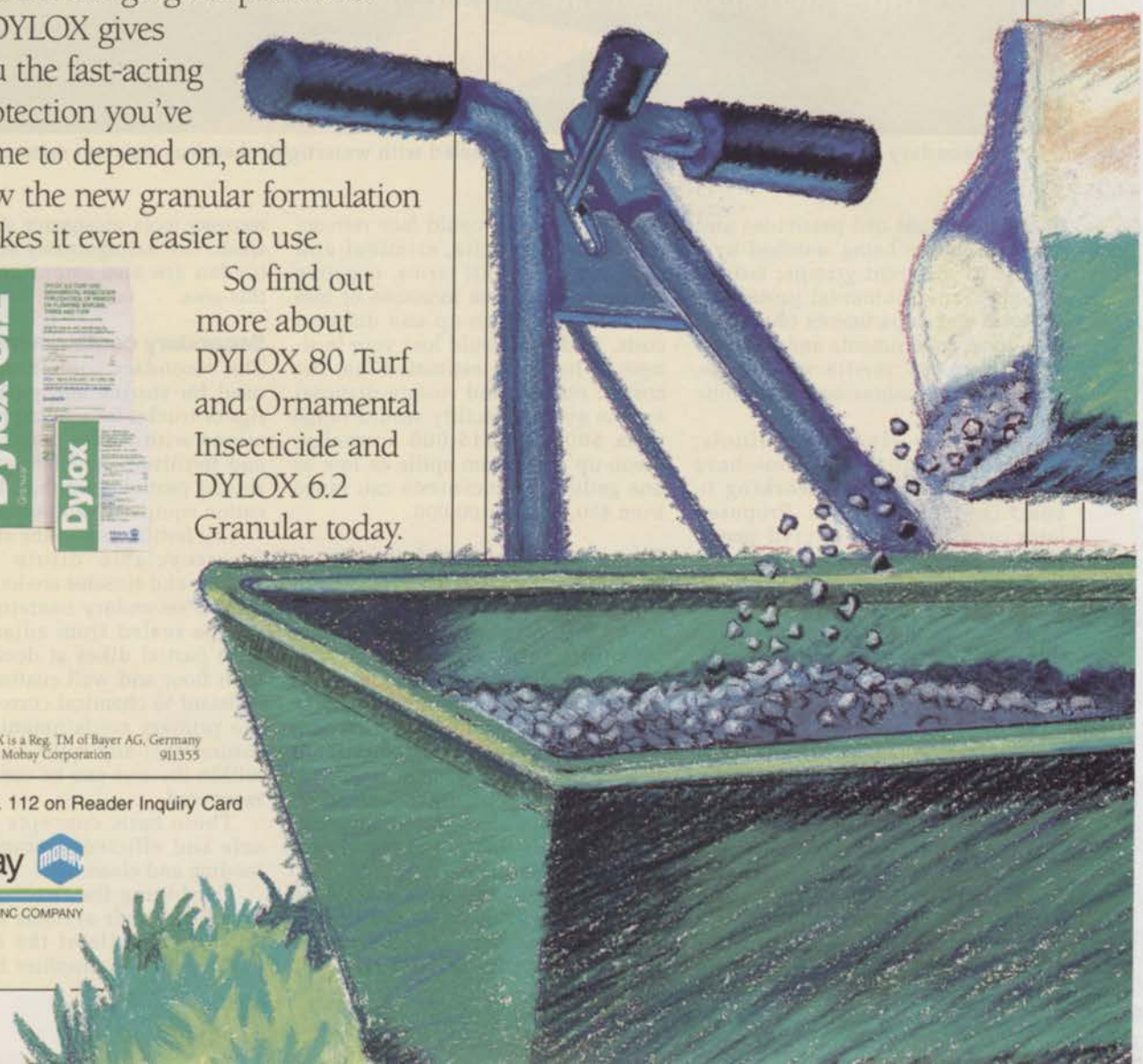

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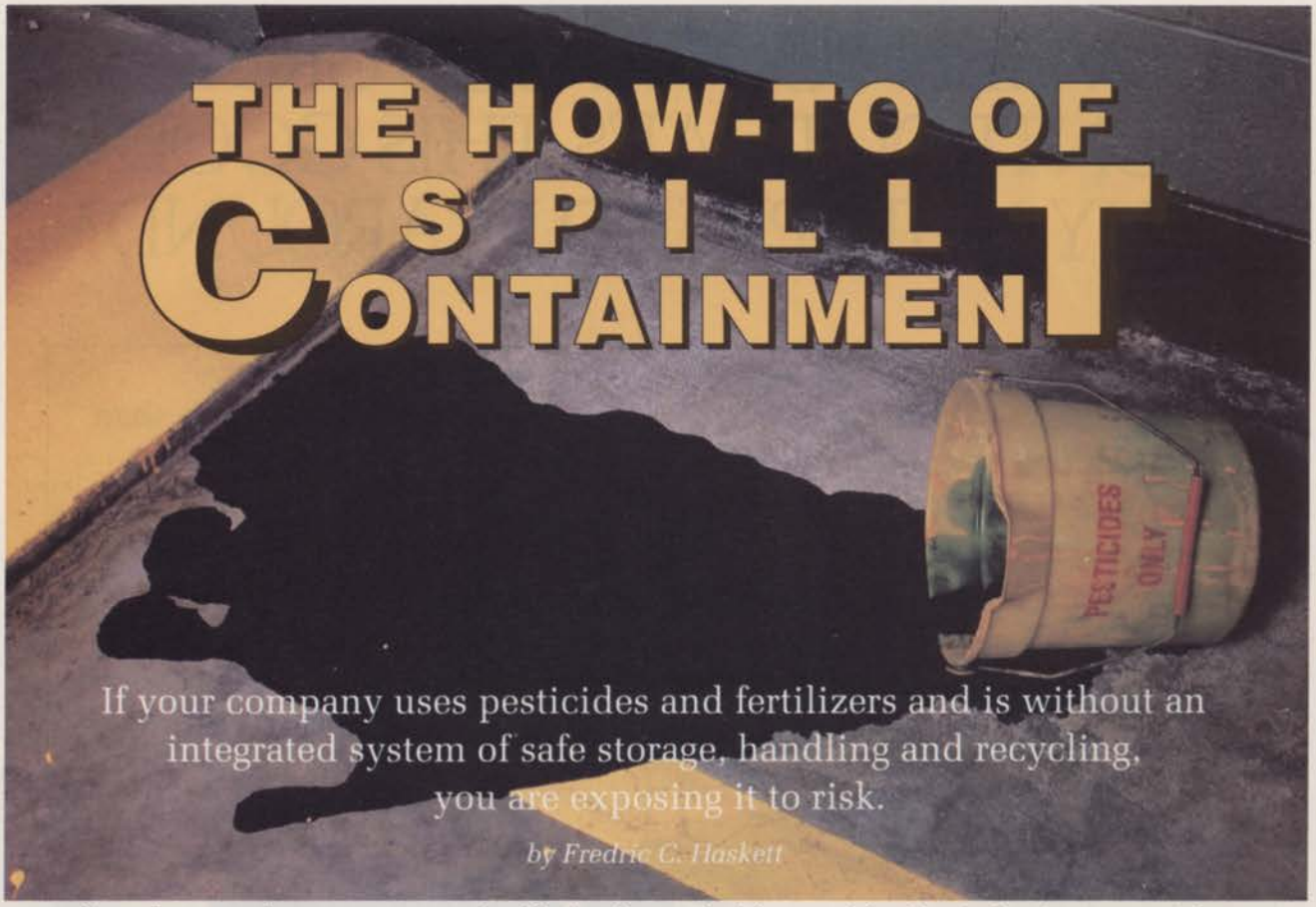
THE HOW-TO OF SPILL CONTAINMENT



If your company uses pesticides and fertilizers and is without an integrated system of safe storage, handling and recycling, you are exposing it to risk.

by Fredric C. Haskett

Secondary containment areas must be diked and treated with watertight, chemical resistant materials.

Industries that use pesticides and fertilizers are being watched by a host of different groups: federal and state environmental protection agencies and departments of agriculture, local governments and environmental groups, media watchdogs, insurance companies and the public at large.

Five states—Indiana, Illinois, Nebraska, Florida and Ohio—have either enacted or are working to enact containment laws. Proposed laws carry jail terms or civil penalties and heavy fines.

The questions you must ask yourself are:

- Can your facility stand up to this scrutiny?
- Can your operation comply with the new regulations?
- Do you know the legal and economic implications of compliance or non-compliance?
- Are you aware of the cost difference between recycling residues and rinsates, and of having them disposed of properly?

The cost of non-compliance

If you answer "no" to any or all of these questions, the results could be catastrophic. You could face retroactive fines, lawsuits, criminal and civil penalties, jail terms, negative publicity, large rate increases or loss of insurance, clean-up and disposal costs. And, you could lose your business. It has been estimated that the cost of residue and rinsate disposal for the average facility would range from $8000 to $15,000 annually. Clean-up costs from spills as low as one gallon of concentrate can range from $50,000 to $100,000.

Primary storage requirements

Examine where and how you store liquid and dry pesticide concentrates. This area should be sectioned off into a primary and secondary containment area.

The primary containment area is used for both storage and mixing operations involving concentrated pesticides. The area must be diked, and the floor and dikes treated or coated with watertight, wear resistant materials that are also resistant to chemical corrosion.

In addition, this area should be further segregated by a partition to control unnecessary or unauthorized access. Equipment such as spill recovery tools, emergency shower/eye wash, fire extinguishers and ventilator fan are also important parts of this area.

Secondary containment area

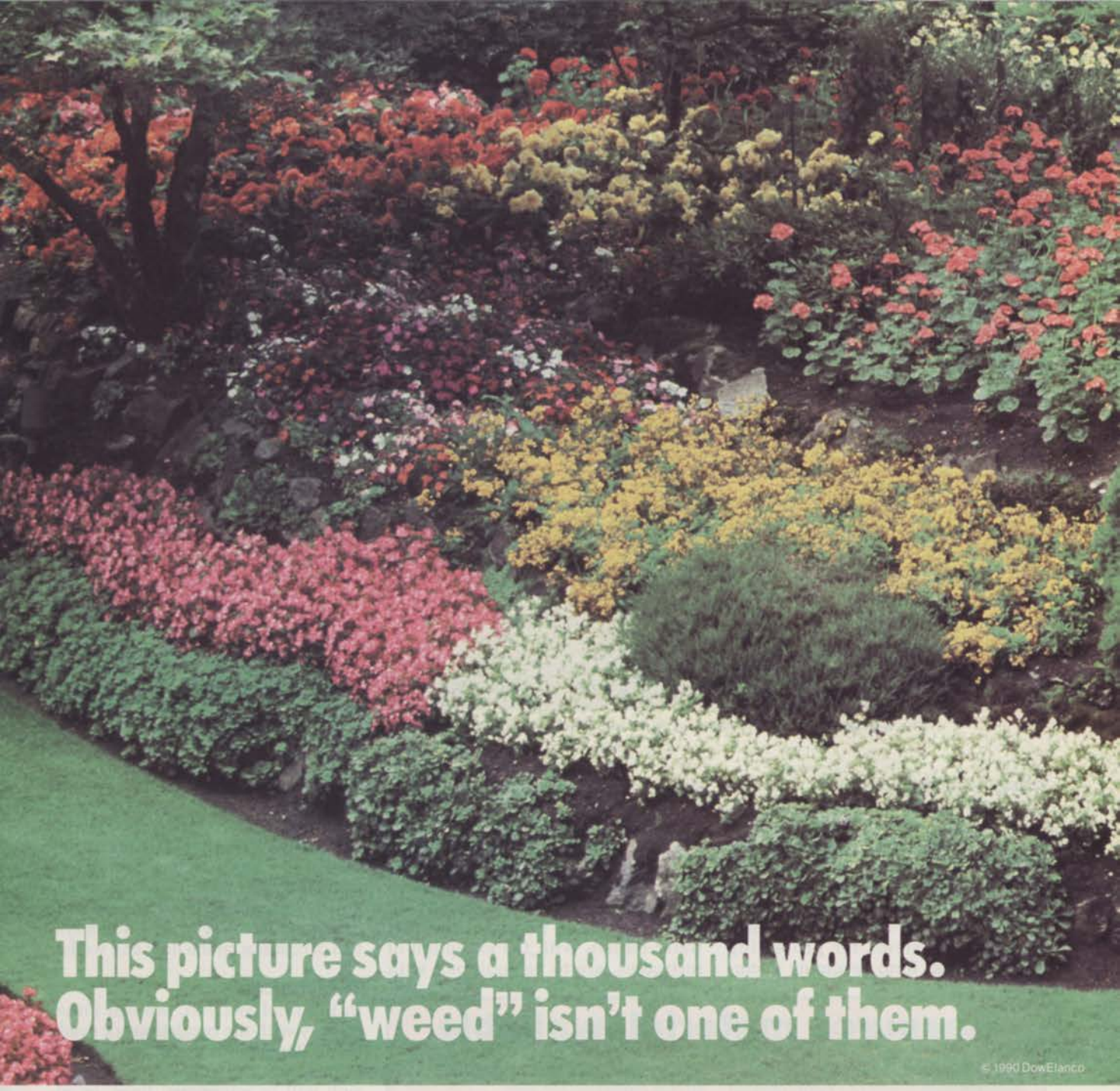
The secondary containment area is used for storing and parking spray rigs or trucks, for loading or fill operations with dilute pesticide mixes and fertilizers, and for washing and rinsing pesticide residues from application equipment and vehicles.

Dry fertilizers and the storage tank for recyclable dilute pesticide residue and rinsates are located here.

The secondary containment area can be sealed from adjacent areas with partial dikes at doorways and with floor and wall coatings that are resistant to chemical corrosion. As is the primary containment area, this insures that any spills or discharges within the area can be contained and recovered.

These basic concepts will bring safe and efficient storage, mixing, loading and clean-up.

Combining the two containment areas and their systems can reduce fill times while at the same time reduce the opportunities for mishan-



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The secondary containment area is used for storage, parking and load-and-fill operations.

dling, accidental spillage, unnecessary exposure and waste.

Recovering and recyling washwater, rinsates, dilute residues and waste concentrates is one of the most critical aspects of this operation. An effective and comprehensive recycling system can be one of the most important systems for protecting your business form becoming a storage site for hazardous waste.

Backflow prevention

The last benefit of a successful system is the protection it offers outside water systems. The primary tool here is a backflow prevention device installed at the main source. All water outlets, with the exception of restrooms, are to be equipped with anti-siphon devices for backup protection.

Additional protection for exterior groundwater areas and sanitary sewer and storm sewer systems is achieved with an integrated combination of containment dikes, self-contained recovery sumps, and a system of coatings on the floor and walls.

Two choices

In the final analysis, we can either comply with the regulations or evade them. Regulations are either in force or pending. The implications for evasion will be enormous: fines, criminal and civil penalties, negative publicity, shutdowns, lawsuits and waste.

Why should you use this system? There are several reasons:

1. After four years of operation, we know it works.
2. It is approved by the EPA and Ohio Department of Agriculture.
3. It can be used with new construction or retrofitted into any existing building.
4. It is easy to install, operate and maintain.
5. It is affordable, and uses available materials.

Most importantly, you will avoid the "status" of becoming a hazardous waste storage site, with the accompanying high cost of proper disposal. **LM**

Resource material available

Fred Haskett has put the steps toward safe pesticide containment into book form. The guide contains information that allows both large and small operations to design and construct an affordable, viable and safe chemical/fertilizer containment area.

Fred Haskett

Haskett's containment system:

- Can be used for new construction or retrofits.
- Provides protection from spillage and leakage.
- Significantly reduces or eliminates storage and disposal of chemical wastes or residues.

The Haskett system has been approved by the Ohio EPA and department of agriculture.

Cost for the guide book is $69.95 plus $4.50 shipping and handling. For more information, contact Haskett at Department LM, P.O. Box 336, Dover, OH 44622; (216) 364-5235. Allow two weeks for delivery.

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  - *60" or 72" side or rear discharge rotaries.*
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- *Power steering reduces operator fatigue.*
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Best of all, the Turfcat gives you a new generation of reliability with our exclusive, hydraulic 4WD and hydraulic PTO. Systems that do away with a host of moving parts. The results are smoother operation and longer life with dramatically less maintenance.

Choose the Turfcat you need: a 22 HP diesel in 2WD or 4WD or a 36 HP gas engine in 2WD.

See your distributor today for a demonstration. Find out how you can improve your upward mobility.

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*Consult your operator's manual for safety instructions when mowing hills.

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CLIPPINGS, FERTILIZER AND MONEY

Landscapers must be more environmentally conscious about minimizing landscape waste. Picking the right fertilizer by studying the on-site effects of numerous N sources helped at Aurora University in Illinois.

By Michael A. Jinks and G. Allen Mayer

Lawn clippings have been an aggravation to most lawn maintenance companies. "To leave it lie or pick it up?" was the question most asked by their customers.

The State of Illinois is implementing a new law which prohibits dumping landscape waste in landfills. Some companies pay more to dump while others stack it in the back of their property, and still others illegally dump it along the road. As another season is about to open, more landfill sites are closing to the landscaper.

At Aurora University, a study was devised to help the university minimize grass clippings while producing a satisfactory lawn color at a reasonable cost. We listed our possibilities:

- The new varieties of dwarf turfgrasses would not realistically work here, because the old turf would have to be removed in favor of new grass.
- Growth regulators have been on the market for years promising many things, but not living up to what we hoped for or wanted.
- So we thought the easiest way to control growth was to control the amount and kind of fertilizer used.

EDITOR'S NOTE: The information on the ensuing pages can be used to plan a fertilizer study of your own, on your own turf. No specific product endorsement by either Aurora University or LANDSCAPE MANAGEMENT magazine is intended. The accompanying chart should not be used to judge the effectiveness of the products listed.

Getting a start

Many fertilizer companies like to promote their lawn care products and tell how well it will green up your lawn. Most will not commit themselves to how long the grass will stay green. More importantly, in light of recent events, they will not commit themselves to the amount of grass clippings their product will produce.

Many fertilizers use a form of slow-release nitrogen. These products in theory produce a slowly-rising curve of nitrogen availability to generate consistent green color.

There are many different forms of slow-release nitrogen, and each has its own curve patterns. This leads many landscapers to use only the "tried-and-true" fertilizers. It is difficult for anyone to compare last year's green with this year's green and take a chance on it.

The intention of this study was not to prove false claims, nor was it to promote any particular products. Rather, it was to provide a method of evaluating fertilizer performance in a given area.

The campus was divided into 15 areas bordered by sidewalks and streets. The areas were measured, then each area was assigned a different fertilizer. Athletic fields became a "control" for the study because in the past, athletic field maintenance has conformed to standards for most lawn maintenance programs.

Dry, granular fertilizers were used in this study. They were applied on May 5 of the year. A second dose was applied on August 28. An additional dose was applied to the athletic fields on July 13.

A 100-square-foot area was marked off from each treated area. Each area marked had as similar as possible sun-to-shade ratio. Every two weeks, the test sites were mowed with a hand mower with bagger. After each test site was mowed, the clippings were loosely poured into a five-gallon bucket marked in half-gallon increments. The number of gallons of clippings per 10 sq. ft. was then recorded. The area was then checked for overall lawn color and recorded. To keep it simple, we devised a four-grade color scale: dull green, light green, good green and very green.

Here at Aurora University, we have a very heterogeneous grass species mix with no dominating dark-pigmented varieties. The color grade "very green" is the color of lush grass high on fertilizer: beautiful, expensive, usually high clipping producers and high on disease. People love the color because it "looks" healthy.

"Good green" is a bright green, the color of healthy grass. "Light green" is a paler version of good green; the color can be an indication of low fertility. Dull green indicates stress.

The amount of rain received each day was also recorded. This helped

Dunham Hall, center for computer studies at Aurora University, where a 34-3-7 analysis granular fertilizer that cost $1.21 per 1000 sq. ft. was used in this study last season.

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AURORA UNIVERSITY FERTILIZER STUDY

Test Number	N-P-K Analysis	Product Cost Per 1000 sq. ft.[1]	Color Grade[2]	Clippings Per cu. yd.
1	24-4-14	$2.52	2.92	2.55
2	15-1-10	$4.28	3.07	3.90
3	13-13-13	$1.52	2.69	3.64
4	12-4-14	$2.10	3.07	4.00
5	25-5-14	$2.88	2.92	3.48
6	25-5-14[a]	$8.62	2.38	0.90
7	18-4-10	$3.56	3.15	4.40
8	40-0-0	$2.68	3.30	3.64
9	20-5-10	$2.68	2.92	3.94
10	6-1-16	$2.32	2.61	3.81
11	34-3-7	$2.42	2.92	4.70
12	15-0-30	$4.06	2.30	2.90
13	22-0-12	$4.00	3.07	3.40
14	26-4-13	$6.18	3.23	3.58
15	18-5-9	$2.94	3.00	4.58
Control	28-6-12	$3.12	3.07	4.49

[1] total for two yearly apps [2] scale: 1-4, 4.0 highest [a] plant growth regulator added

evaluate the results; heavy rains explained sudden jumps in color and volume. Furthermore, the breakdown of product components was recorded.

The cost of fertilizer per treatment of 1000 sq. ft., the number of pounds of nitrogen per 1000 sq. ft., the unit cost and the square footage of treated area were calculated and recorded.

Readings were taken every two weeks.

The lawns on campus were maintained at two to four inches. The lawn was also sprayed with 2,4-D broadleaf weed killer.

All clippings were left on the lawns. (The piles of clippings did after a few days begin to detract from the campus's overall appearance.)

As the clippings dried up and grass grew up through the dry material, the campus started to look satisfactory. As the season wore on, fewer and fewer clippings were evident. It is possible that a bonus effect of the unremoved grass clippings was increased organic matter in the soil and thus increased fertility.

This was our study; the numbers that can be generated by your own study should be enough for any landscape company manager to make sensible decisions on environmental concerns, aesthetics and the bottom line.

Results

One would think that the most expensive fertilizer would yield the best turf, but that was not always the case.

Fertilizer numbers 6 and 12 both show the worst on color grade and nearly the least on the amount of clippings generated, this with nearly the most dollars per square foot. Number 12's 15-0-30 analysis may have a specific purpose, not as a general use lawn fertilizer.

Number 6 is the only site we use a plant growth regulator, mefluidide. When treatment was given in the spring and the lawn turned brown for a week and treatment was done in the fall, the lawn turned brown until snowfall. We were hoping for a full recovery by spring.

The next group of fertilizers are the high producers of clippings and rating high on the color grade. Numbers 2, 4, 7, 9, 11 and 15 also represent the main kinds of fertilizers found in the marketplace: they will give a fat green lawn at a wide variety of prices.

The next group of fertilizers is an oddball group. Number 3 (13-13-13 analysis) is an all-purpose fertilizer. This is one of the better lawn starter feeds. Number 8's claims to fame is . that it consists of only 40 percent nitrogen from only Nutralene. This fertilizer took a considerable amount of time and moisture to "kick in." Number 10 has the lowest nitrogen percent of six. This one also has the lowest non-PGR readings on the color grade scale.

The last group are outstanding in color grade and below average clipping amounts. They also vary in price from $2.52 to $6.18 per 1,000 sq. ft. per year. Numbers 13 and 14 were the most expensive of the high quality fertilizers. Numbers 1 and 5 rated low in cost, average in color grade and below average in amounts of clippings produced. These two fertilizers would be the choices I would make for the next year's fertilizer program.

We in the landscaping/lawn care professions must be environmentally-conscious about what we do here at work and at home. For 30 years the horticulture industry has been blamed for many environmental ills. We must be tougher on ourselves and others and take the lead to make the environment our real cause and not just an advertising gimmick **LM**

Michael A. Jinks is groundskeeper at Aurora University in Aurora, Ill., and G. Allen Mayer is a student who helped conduct the project and write this paper.

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Turf-Type Tall Fescue rated #1 four consecutive years.

Nationwide testing at 41 sites of turf-type tall fescues place ARID as #1, and the first choice for athletic fields, parks, playgrounds and public area lawns.

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Mean Turfgrass Quality Ratings of Tall Fescue Cultivars At Four Shade Locations in the United States

Quality Ratings 1-9 — 9=Ideal Turf

Name	Mean
Arid	6.0
Finelawn I	5.6
Trident	5.4
Pacer	5.3
Mustang	5.3
Apache	5.2
Tempo	5.1
KY-31	5.0
Falcon	5.0
Houndog	5.0
Adventure	4.9
Jaguar	4.9
Bonanza	4.8
Olympic	4.8
Maverick	4.7
Willamette	4.6
Rebel	4.5
Clemfine	4.4
Brookston	4.4
Johnstone	4.0
Kenhy	3.4

Data from USDA National Turfgrass Evaluation Program

Drought Tolerance (Dormancy) Ratings of Tall Fescue Cultivars

Dormancy Ratings 1-9 — 9=No Dormancy

Name	Mean	Name	Mean
Arid	7.7	Chesapeake	5.7
Olympic	7.7	Tempo	5.3
Apache	7.3	Houndog	5.0
Jaguar	7.3	Pacer	5.0
Finelawn I	6.3	Johnstone	5.0
Mustang	6.3	Kenhy	5.0
Rebel	6.3	Maverick	5.0
Bonanza	6.0	Brookston	4.3
KY-31	6.0	Clemfine	4.3
Adventure	5.7	Trident	3.7
Falcon	5.7	Willamette	3.3
Finelawn 5GL	5.7		

Data from USDA National Turfgrass Evaluation Program

Brown Patch Ratings of Tall Fescue Cultivars

Brown Patch Ratings 1-9 — 9=No Disease

Name	Mean
Arid	6.3
Adventure	6.2
Jaguar	6.1
Rebel	6.0
Pacer	5.9
Maverick	5.8
Falcon	5.8
Clemfine	5.7
Apache	5.6
Tempo	5.6
Olympic	5.6
Houndog	5.6
Chesapeake	5.5
Finelawn 5GL	5.5
KY-31	5.5
Mustang	5.5
Bonanza	5.5
Trident	5.5
Johnstone	5.5
Finelawn I	5.3
Kenhy	5.0
Willamette	4.9
Brookston	4.3

Data from USDA National Turfgrass Evaluation Program

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Geotextiles solve erosion problems

These before-and-after photos, taken at a golf course in Meridian, Miss., illustrate the effectiveness of geotextiles in repairing an eroded creek bed. Once in place, the matting is invisible.

An increasing number of golf course superintendents are turning to lightweight, easy-to-handle geomatrix materials to manage areas pestered by soil erosion.

Usually constructed of woven nylon, geotextile matting provides turf roots in sloped areas with a secure reinforcement against the damage caused by wind and heavy rain.

Golf course superintendents who have tried geotextiles wonder how they ever got along without them. The typical scenario is one in which supers get tired of endless complaints from disgruntled golfers.

After heavy rain, they would have to suffer endless questions and comments on the unplayable condition of one or two especially eroded and unsightly areas. Cart paths also fall prey to erosion after heavy rain. Inadequate drainage can worsen the problem, as can a creek that can't always handle the large volume of stormwater.

Skip Lambert, staff agronomist with Turf Services, a division of Erosion Control Systems, Inc., sug-

Fabrics stabilize, need little or no care

Jim Kirchdorfer of the Golf Development Co., Louisville, Ky., and agronomist Louis Miller, recently installed Supac, a geotextile made by Phillips Fibers Corp., a division of Phillips 66. The Louisville supplier was Irrigation Supply Co., Inc.

"We were basically looking for two main functions," says Kirchdorfer, "separation and stabilization."

Kirchdorfer has found bunkers especially tough to maintain. "You want to keep your sand nice and clean, and you don't want to infiltrate your drainage system," he explains. "A correctly installed geotextile does this nicely."

Kirchdorfer says the geotextile stabilized weak areas besieged by heavy wheel traffic, and lessened erosion. The Supac geotextiles are made from polypropylene, a petrochemical-based polymer. They are chemically and biologically inert, will not decompose in soil due to bacterial or fungal action, and are unaffected by acids, alkalies, oils and most chemical solvents.

Materials are available in weights from four to 18 ounces per square yard; Each roll 15 feet wide and 150 feet long. □

Where to find geotextiles

ACF, Inc.
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Akzo Industrial Systems.
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Atlantic Construction Fabrics, Inc.
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Belton Industries, Inc.
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Conwed Fibers.
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Dewitt Co.
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Jonathan Green, Inc.
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Hoechst Celanese Corp.
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Hydro-Turf & Assoc.
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North American Green, Inc.
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Phillips Fibers Corp.
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Proseed USA, Inc.
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Reemay, Inc.
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Warren's Turf Nursery, Inc.
Circle No. 315 on Reader Inquiry Card

gests superintendents try the Enkamat three-dimensional nylon geomatrix matting. The soil-reinforcement matting, from Akzo Industrial Systems, Asheville, N.C., is placed on a sloped surface and covered with soil or sod. Vegetation takes root around the nylon fibers of the flexible geomatrix, making the soil almost impervious to damage by heavy water flow.

Once in place and covered by vegetation, the matting is invisible, adding an aesthetic appeal not available with traditional erosion control materials, according to Akzo.

Following an engineering survey at a golf course in Meridian, Miss., a proposal to stabilize the erosion in a two-phase project was approved by the club membership.

Phase I, which was initiated during the summer, was designed to take care of the most immediate concern, stabilizing the upper slopes of the ditch.

Taking action

The ditch was enlarged, straightened and the top slope dressed. The Enkamat, in widths from three to 15 feet, was rolled into place, cut and anchored with 10-inch wooden stakes. Sod was installed on top of the matting. More than 4,800 square feet of matting and 54,000 square feet of sod were used.

Geotextile matting will secure roots in sloped areas against damage caused by wind and heavy rain.

"We used Tifton hybrid bermudagrass sod with roots that can grow to a depth of two feet in a year," says Lambert. "The matting serves as a root supporter, permanently anchoring the grass."

Phase II of the project will be put into action next year, and will involve laying Enkamat in the lower sections of the ditch.

According to Lambert, there are several advantages to using the nylon geomatrix rather than rip rap or concrete.

"It would have cost twice as much to use rip rap, and three times as much to use concrete to line the ditch," says Lambert. "We don't have rip rap in this part of the country, which means we would have to truck it in. Our experience has also shown that rip rap can be washed out in heavy storms.

"Concrete is expensive," continues Lambert, "and water can get underneath it and cause it to crack. We would have had to worry about balls ricocheting off concrete or rip rap and hitting someone. You can't hit a ball out of a ditch covered with concrete or rock either."

Club members were also worried about what an endless stream of heavy trucks hauling in concrete would do to the course and cartpaths.

"Rip rap and concrete can also be unsightly," says Lambert. "Once we lay sod on top of it, you will never see the matting. The result will be a channel lined with lush grass that will be pleasant to look at."

The maintenance crew found grass along the highly eroded creek banks difficult to mow. Once the grass takes hold in the matting, they will be able to go right up to the edge with the riding mower. Before, the area had to be cut by hand.

"These improvements will enhance the appearance of the course and along with some additional drainage improvements, reduce significantly the number of days the hole is unplayable," says Lambert. **LM**

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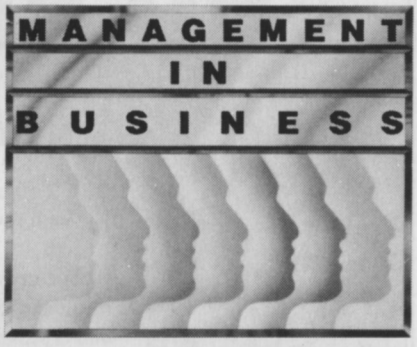
THE COST OF BEING CARELESS

Each day, more than five percent of service industry workers have an accident. Here's a look at how the costs add up.

by E.T. Wandtke

To most workers, safety means driving with caution and using equipment carefully. Yet, more than five percent of service workers have some type of accident each day.

The lawn care and landscape industries are not immune to danger, and costs for accidents are on the rise. Where are the costs of not being safe accounted for in most green industry companies? Can they be reduced, and preventive measures taken to guard against accidents in the future?



Where accidents happen

The three places where green industry accidents most happen are: in the shop, on the road, or on the job. Three other not-so-obvious locations are: parked along the highway or property being serviced, driving to and from work, and at home.

Where you pay

You pay for safety lapses with higher workman's compensation premiums. This cost is irrespective of where your accountant is charging the expense. The size of this premium is directly dependent on the size of your company and the job classifications which your employees are assigned to.

Disability insurance is another area where higher premiums will increase your safety costs. The premium rating for disability insurance is directly dependent on the experience the carrier is having with your industry and company. These safety costs may be charged by your accountant to a variety of different accounts depending on the sophistication of your bookkeeping system.

Many companies are experiencing insurance premiums averaging $600-$800 per year per insured vehicle. In major metropolitan areas, the cost could be 50 to 150 percent higher.

Equipment breakdowns due to unsafe operation is another problem area. Motor vehicle accidents in the parking lot and on the highway increase your safety costs even though they may be accounted for as repair and maintenance expenses. Many companies incorrectly see this cost and blame the equipment for the cost. Carelessness in the workplace is accounted for in payroll costs, when an employee is paid for time off when injured, or while visiting a doctor or hospital.

More green industry companies are having their vehicle insurance rated by insurers because of accidents.

Reducing the cost

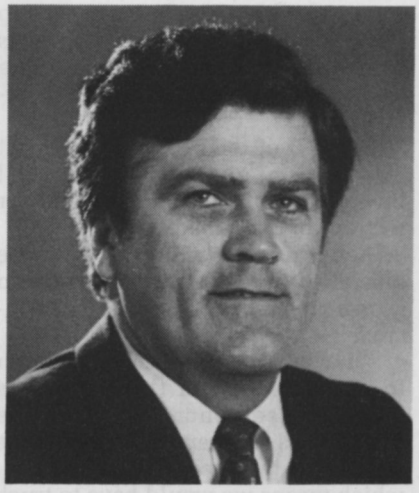
Posting the days since the last auto accident, number of hours since a lost production hour was recorded, or number of days since an employee missed work due to an accident are excellent visible methods of reducing your safety costs. Implement a safety awareness program to complement the posting idea. Provide a safety tip of the week or month. Institute a safe employee-of-the-month award.

Each of these efforts will increase your employees' safety awareness.

Financial incentive

A safety program requires the lead and involvement of management. Use reminders like buttons, pins, decals. All help to increase your employees' awareness of the need to be thinking and acting safely. Tying their safe job performance to a year end bonus has been used as a motivator in the past.

Don't wait. Make your company "safetywise" today. **LM**



Ed Wandtke is a senior consultant with All-Green Management Associates in Columbus, Ohio.

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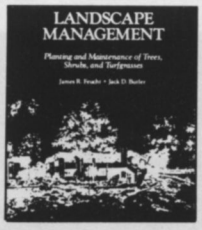

305 - LANDSCAPE MANAGEMENT
by James R. Feucht and Jack D. Butler
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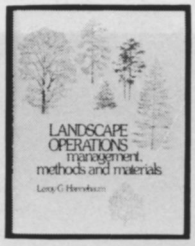

370 - LANDSCAPE OPERATIONS: MANAGEMENT, METHODS & MATERIALS
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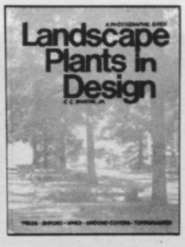
An in-depth examination that combines technical training in landscape science with methods of accounting, business management, marketing and sales. Discusses effective methods for performing lawn installations, landscape planting and maintenance. Step-by-step accounting calculations are explained in simple terms. **$54.95**



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by Edward C. Martin
An annotated black & white photographic guide to the design qualities of ornamental plants and their aesthetic and functional use in landscape designing. Over 600 trees, shrubs, vines, ground covers and turfgrasses are described in non-technical language. Over 1900 photographs. Provides a basis for selecting the best plant materials for any particular use in landscape design. Contains detailed indexes that provide quick reference to particular design qualities and growing conditions. **$69.95**

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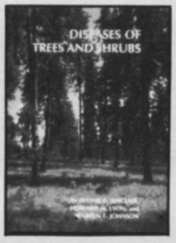

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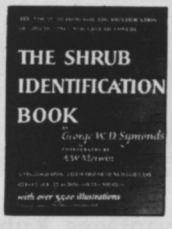

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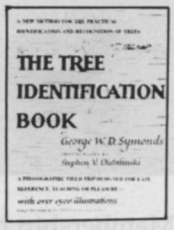

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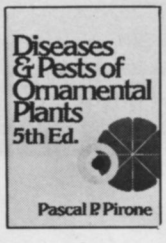

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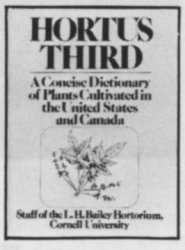
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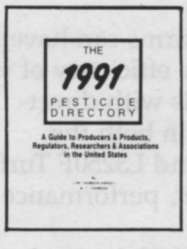

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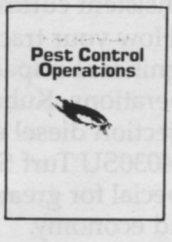

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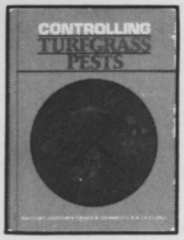

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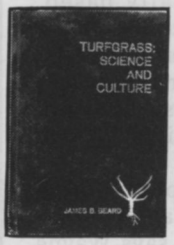

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Organic wetting agent offers an alternative

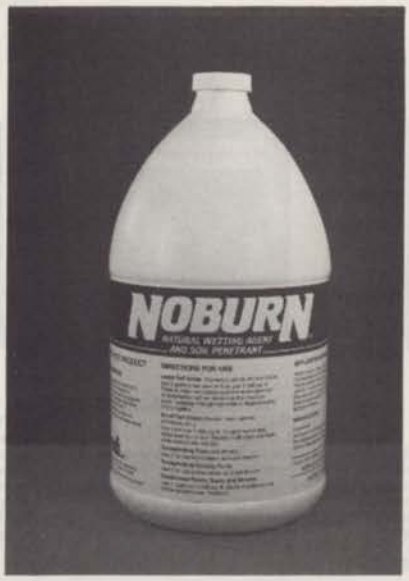
A new organic wetting agent and soil penetrant gives turf managers an alternative to synthetically-based products and offers several advantages over conventional wetting agents, says its manufacturer.

Noburn is organically based, does not burn or discolor turf or ornamental plants, and can be applied with many fertilizers and pesticides. Noburn also does not have to be watered in immediately after application.

"Noburn can be applied during the day and watered in at night during routine irrigation," says Wayne Wall, president of Roots Inc. "This product offers turf managers an effective tool for increasing watering efficiency while eliminating worries about phytotoxicity, particularly in hot, dry weather."

The wetting agent is a natural surfactant derived from extracts of the desert-growing yucca plant, first called SSO.

Dr. Keith J. Karnok, turfgrass agronomist at the University of Georgia in Athens, tested SSO in two research studies. "In terms of burn or discoloration, SSO appears to be quite safe regardless of rate," says Karnok, who experimented with SSO rates ranging from 16 to 128 oz.



Among Karnok's findings: SSO rates higher than 16 oz. per 1,000 sq. ft. did not result in greater effectiveness.

When combined with some commonly-used turfgrass pesticides, the University of Georgia study concluded that using SSO resulted in no phytotoxic damage to turf. "It should be remembered that this study was not all inclusive when one considers the great number of pesticides used on turfgrass," Karnok cautions.

Says Bob Wicker, president of Southeastern Turfgrass Supply, Jacksonville, Fla.: "Any time you can replace a synthetic chemical product with an organic one, some customers will be interested in the organic approach."

Florida water restrictions are also fueling interest in these products. Timely and regular use of these wetting agents can cut watering time and increase irrigation efficiency, Wicker believes.

Circle No. 191 on Reader Inquiry Card

New seed area covering easily, quickly applied

From Synthetic Industries comes Lanstrand, a polypropylene spray

product which protects against erosion in newly-seeded areas.

The firm says the foamy substance may be applied to degrade either quickly or slowly, depending on job conditions. Application costs less than mat or blanket products, Synthetic Industries says.

The substance is non-toxic and non-hazardous. Protective gear is not needed when applying.

Circle No. 192 on Reader Inquiry Card

Turfcat lawnmower line unveiled to market

From Jacobsen comes a new line of Turfcat out-front mowers.

The line features both gas and diesel power plants from 17 to 36 hp. Three- and four-wheel drive options are also available.

The Turfcats accommodate rotary decks in 50-, 60- and 72-inch sizes and fine-cut flail decks in 50- and 60-inch lengths.

Optional equipment includes snow thrower, brush, blade and blower attachments.

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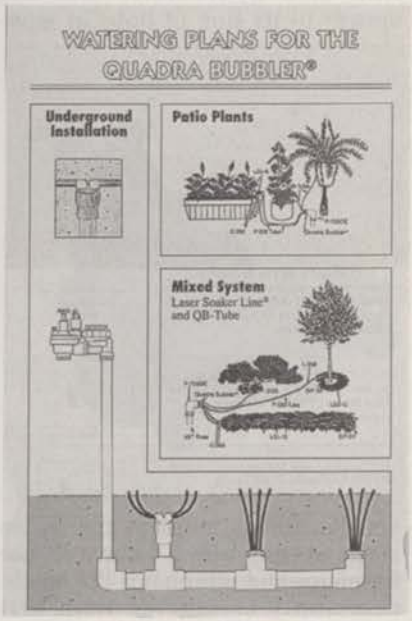
Handbook details conservation tips

Pepco Water Conservation Products,

Inc. offers a 36-page handbook on conservation techniques including drip systems, micro-irrigation,



quadra-bubbler and laser drip tube methods sold by the firm.

The handbook details specific methods of laying out various irrigation systems and offers professional tips on many facets of design.

Head designs, piping layouts, accessories and other planning steps and purchases are discussed.

Circle No. 194 on Reader Inquiry Card

Wider weed-fighting fabric rolls now marketed

WeedBlock, a fabric designed to retard weed growth in gardens and landscaped areas, now comes in four- and six-foot widths, manufacturer Easy Gardener, Inc. announces.

The geotextile blocks 95 percent of weeds while simultaneously allowing air and water to freely pass to the ground surface.

Easy Gardener says it has added the two wider rolls in response to consumer demand. The company says beds surrounding shrubs are often wider than three feet, the width of WeedBlock rolls now sold.

The firm says the wider rolls will lessen the need for piecing patches together to cover an area. The three-foot width rolls with continue to be sold.

Circle No. 195 on Reader Inquiry Card

New ornamentals herbicide is registered

American Cyanamid Co. announces its Image herbicide has received EPA registration.

The herbicide, introduced in 1987, has been used by professional turf managers to control purple nutsedge, wild onion and garlic and other weeds.

Image may now be used at labeled rates on Indian hawthorne, dwarf yaupon holly, blue pfitzer juniper, Helleri holly, red tip photinia, yucca, wax myrtle and other shrubs. Ground cover applications include Asiatic jasmine, giant liriope, variegated liriope, pachysandra and mondo grass. The product may also be used around hosta and society garlic perennials and red crepe myrtle.

The herbicide may assist in control of tall fescue, violets, crabgrass annual sedge and Virginia buttonweed.

Circle No. 196 on Reader Inquiry Card

Sprayer works with turf truckster vehicle

A new 240-gallon turf sprayer is now available from Cushman; a fifth wheel attachment designed to work in tandem with the company's Turf-Truckster vehicle.

The spray boom is self-leveling over uneven surfaces and can be adjusted from 6 to 24 inches above the

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turf surface. A high-pressure hand spray gun also comes with the unit.

Thefiberglass tank resists chemical corrosion and ultraviolet rays. The trailer frame is constructed of heavy-duty tubular steel. A two-inch ball hitch connects the unit to the Turf-Truckster

Circle No. 198 on Reader Inquiry Card

Thatch reduction product tested; found safe

Bio Groundskeeper has been found non-toxic and non-irritating to eyes, says KLM Bio Systems, Inc., manufacturer of the product.

Bio Groundskeeper, which contains microbial extracts and bio-catalysts, comes in liquid concentrate form and is applied by spraying.

Tox Monitor Laboratoriess, Inc., in Oak Park, Ill., says Bio Groundskeeper made its findings earlier this year.

Bio Groundskeeping aids in speeding up natural decomposition of thatch.

Circle No. 199 on Reader Inquiry Card

38-inch rider now on the mower market

New from Husqvarna is a riding mower model 970-12 which features a 38-inch cutting deck, 1.8 gallon fuel tank and high torque 12 hp Briggs & Stratton engine.

According to the company the mower has a rear wheel steering system which permits easier and tighter turning in small spaces .

The front-mounted blade empties into a side-mounted bagging unit which houses two six-bushel containers.

Circle No. 200 on Reader Inquiry Card

Hydrostatic mower added to power mower line

Ransomes has announced the adition of a hydrostatic mid-size mower to its line of Bob-Cat mow-

ers. Ransomes believes the hydrostatic system offers improved performance and eliminates the hassles commonly associated with belt-driven mowers.

A zero turning radius offers enhanced maneuverability. The line has two cutting widths, 54- and 61-inches, forward and reverse walking speeds up to 6 mph and 2 mph, respectively.

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Bringing new life to the old neighborhood is as easy as one, two, tree! With the help of our city forester . . . a little muscle and sweat . . . and a lot of fun, we're bringing a fresh new look to our street by planting trees. You can turn a new leaf in your neighborhood, too. For your free booklet, write: Tree City USA, The National Arbor Day Foundation, Nebraska City, NE 68410.
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BUCKET TRUCKS, Straight Stick, Corner Mount and Knuckle Boom Cranes. Brush Chippers - New Asplundh (Morbark Disc Type), New Asplundh Drum Type. Best prices anywhere. Used Chippers - Asplundh, Woodchuck, etc. 2 to 8 usually in stock. Sprayers, Dumps, Stakes, Log Loaders, Crew Cab Chip Box Dumps, Railroad Trucks, 50 in stock. Sold as is or reconditioned. Opdyke's, Hatfield (Philadelphia Area) 215-721-4444. TF

MISCELLANEOUS

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PROBLEM MANAGEMENT

Gallery for weed control

Problem: *How good is Gallery herbicide for weed control? We understand that a fall application of this will control many weeds. (Washington, D.C.)*

Solution: Gallery 75 Dry Flowable is a pre-emergence herbicide manufactured by DowElanco. It is labelled for use on turfgrass and landscape ornamentals. This selective herbicide contains a new chemical compound, isoxaben, which controls annual grass and 44 broadleaf weeds, including chickweed, henbit, plantain, purslane, oxalis, spurge and white clover.

Reports do indicate that a fall application of Gallery can control winter and summer annuals until the end of June. It has no post-emergence activity. Apply Gallery in late summer to early fall, or in early spring, prior to germination of target weeds. Reports indicate that to manage the weeds throughout the summer, the late fall application should be followed with an early spring application. If the application is done in the spring, it should suppress weeds throughout summer.

Gallery can be used on warm- and cool-season turfgrass. Established turf may be reseeded in the fall after a spring application of Gallery. Gallery is reportedly compatible and can be tank mixed with other herbicides registered for use on turfgrass. Gallery is stable on the soil surface for up to 21 days. To be effective, it must be activated with 0.5 inches of rainfall or irrigation.

Read and follow label specifications for better results.

Mountain turfgrasses

Problem: *We have had problems establishing lawns in mountain areas, about 100 miles southwest of Charlotte. What kind of grass would you recommend for planting? (North Carolina)*

Solution: Try using a mixture of two improved turf-type tall fescue varieties (45 percent each) and a Kentucky bluegrass (10 percent).

Properly cultivate and grade the intended seed bed. Consider a soil test by your cooperative extension service, and follow its recommendations for any corrections of pH or other factors.

March is the ideal time to incorporate phosphorus since surface-applied phosphorus does not move in soil.

Use clean, certified seeds with good germination rates. Using a rotary or drop spreader, spread half of the recommended rate of the seed mixture in one direction, and the other half in the opposite direction for the most uniform coverage.

Gently pull a leaf rake upside down over the seeded area. It is important to maintain seed and soil contact for proper germination and establishment. Then, spread straw (not hay) mulch, no more than ½-inch thick, over the seeded area. Keep this area moist but not wet throughout the germination and establishment period.

Tall fescue will germinate within a week. The bluegrass may take two to three weeks to germinate. Germination and establishment depends on adequate moisture. Therefore, it may take a long time under certain conditions. If at all possible, delay the pre-emergence and post-emergence herbicide application until the turf established well. Maintain the turf through proper plant health care practices, such as proper watering and fertilizing and pest management as needed.

Diplodia: a refresher

Problem: *Do you have information on diplodia tip blight, especially as found on Austrian pine? (Ontario, Canada)*

Solution: Diplodia tip blight disease, caused by *diplodia pinea (Sphaeropsis ellisii),* can be found on two- to three-needled pines such as Scotch, Austrian, mugo and ponderosa.

Affected plants generally produce resin droplets at the base of the needles as the first sign of the disease. During spring, emerging needles turn brown at the base. Later, the entire needle turns brown.

Quite often the candles produced during the infection year will be completely killed. If conditions for the disease are favorable, the second and third year's new growth will also be killed. As a result, there will be little or no new healthy tissue being maintained over several years.Valuable trees should be maintained with a proper plant health care program: proper watering, fertilizing, mulching and pest management as needed.

Where practical, removing two-year-old cones and selective pruning of affected plant parts when dry is extremely beneficial in reducing the inoculum and further spread of the disease. Susceptible trees also can be protected by applying approved fungicides. It is important to provide the first treatment prior to the candle emergence from the sheath. Then repeat the treatments two to three times at seven- to 10-day intervals. During rainy periods, shorter intervals are needed.

Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

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TURCAM®'s advanced carbamate chemistry goes to work fast—and offers effectiveness that lasts—against white grubs as well as mole crickets, chinch bugs, sod webworms and other destructive pests. This hard-working insecticide is odorless. . .cost-effective. . .easy to apply. What's more, TURCAM won't tie up in thatch or damage turf and ornamentals.

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Circle No. 117 on Reader Inquiry Card

For excellent shade performance . . .

RAM I

KENTUCKY BLUEGRASS

Most turf experts agree — good natural resistance to powdery mildew is an important factor in a bluegrass' adaptability to shade. Tests and use show Ram I to have excellent resistance to powdery mildew, lending to its outstanding shade performance.

Reaction of Kentucky bluegrass cultivars and selections to powdery mildew in a spaced-plant nursery at Adelphia, New Jersey.

Cultivar or Selection*	Powdery Mildew Rating 9 = most disease
RAM I	0.0
Glade	0.0
Nugget	0.0
Mystic	0.0
Touchdown	0.0
Sydsport	0.5
Plush	2.0
Baron	3.0
Cheri	3.5
Victa	3.5
Geronimo	4.0
Majestic	5.0
Bonnieblue	6.0
Adelphi	6.5
Vantage	6.5
Rugby	7.0
Parade	7.0
Pennstar	7.0
Fylking	7.0
Merion	8.0
Windsor	9.0

*Commercially available Kentucky bluegrass varieties

Whatever your bluegrass specifications, remember . . . what you seed is what you get . . . sow Ram I.

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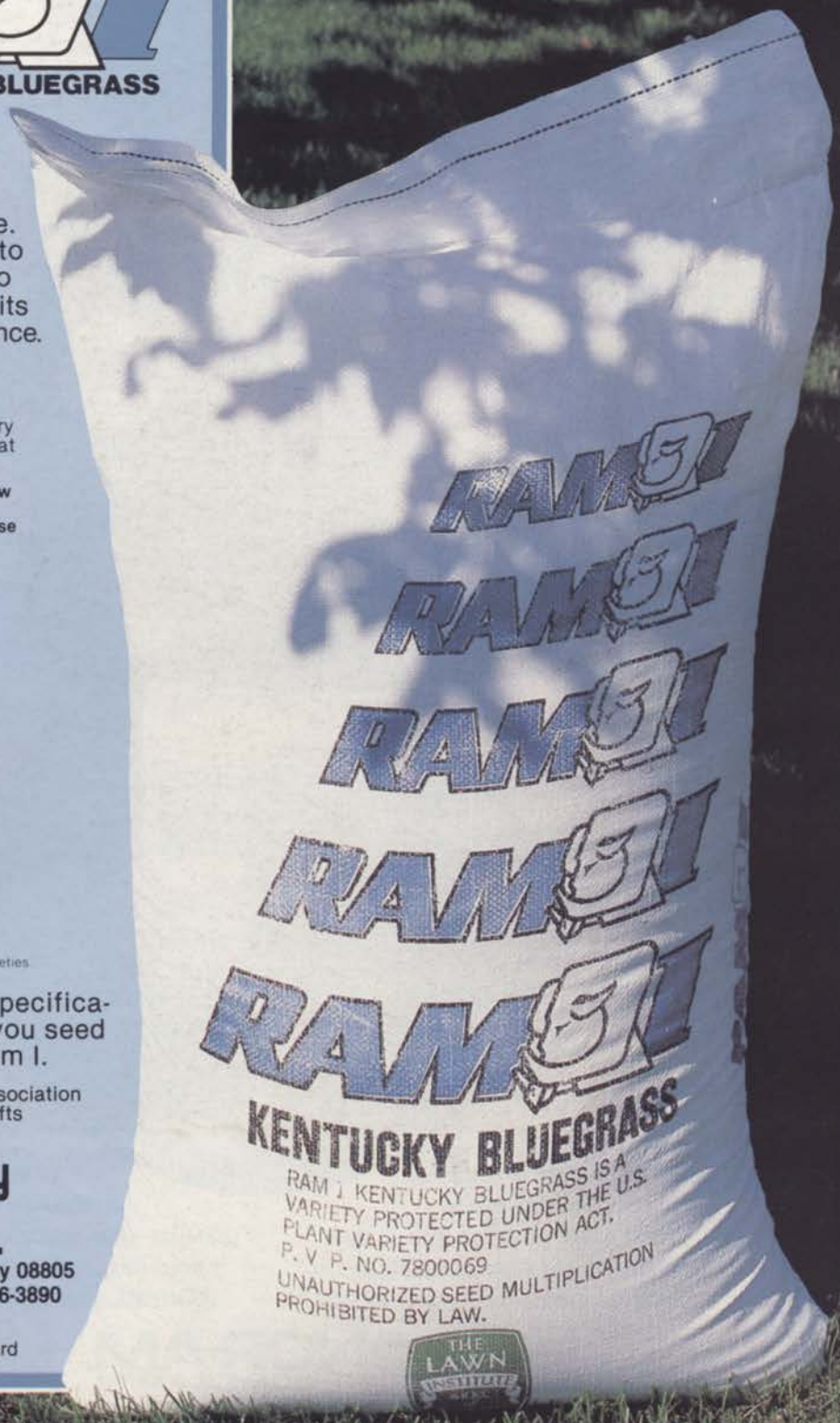
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